Lectures
ON
DISEASES OF THE RECTUM.

Delivered at the Hospital for Women, Soho-square.

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LECTURE III.

ULCERATION—STRICTURE—RECTO-VAGINAL FISTULA—RECTO-VESICAL FISTULA.

GENTLEMEN,—One form of ulceration of the rectum is, as I have said, connected with fissure, and is readily cured by an incision through the middle of it. But there are cases of ulceration of the rectum of a different and more extensive character. They are most frequently met with on the dorsal aspect of the rectum, and occasionally extend completely round the bowel within a couple of inches of the anus. Their causes are various, but I believe the most common is syphilis. This form of disease is said to occur sometimes as a result of dysentery, and it is found occasionally without any obvious cause; but by far the most common cause, as I have seen over and over again among the out-patients attending here, is syphilis. I do not mean primary syphilis. Of course, unfortunately ulceration may be found here occasionally as the result of primary syphilis, though I have never myself seen such a case. But I refer to secondary or tertiary ulceration of the mucous membrane of the rectum, which may occur, just as may ulceration of the fauces or palate, during the course of constitutional syphilis. If ulceration is also present in the latter situation, it would, of course, much clear up the diagnosis of the nature of the affection of the rectum.

The symptoms are pain of a wearying constant character and profuse purulent discharge. The amount of discharge that may come from a patient under these circumstances is really quite remarkable. I have here the paper of a patient who is attending at the present moment, and who presents a well-marked example of this affection. She is a woman aged twenty-nine, who married eight years ago, and has had one child and one abortion. She stated that she had "been passing blood and corruption from the anus, and had had much pain, but that there was nothing else the matter with her." On examining the rectum, I found, an inch and a half from the anus, a hard irregular state of the bowel, ulcerating, and pouring out a large quantity of fluid. When this woman came under my care I put down my diagnosis, syphilitic ulceration of the bowel, and proceeded to treat it on the same principles that I should treat secondary ulceration of the fauces; I mean I used mercurial applications locally and gave iodide of potassium internally. With the object of checking the discharge she been using sulphate of copper lotion, ten grains to the pint, the direction having been given to inject a quarter of a pint and retain it for ten minutes. She has been here to-day: the discharge has wholly ceased, and the ulceration is beginning to heal, and I hope we shall be able to cure her. Of course, there is the danger, to which I shall have to advert directly, that there may be an unhealthy degree of contraction, and a stricture may result. Obviously, the first thing is to get the ulceration to heal, and by passing a bougie occasionally we may prevent the contraction. I am sorry to say we see here a large number of such cases—of married women who become infected with syphilis and get ulceration about the rectum. A large number, too, do not come until the ulceration has got into the stage of stricture.

What is to be done with ordinary ulceration of the rectum?—for no doubt there is a simple ulceration occurring in the rectum, not syphilitic. In the first place, the great thing is to put the patient in perfect rest. Keep her in bed, and give a perfectly bland diet, which cannot possibly irritate the mucous membrane. If, after a fair trial of that for some time, the ulceration does not heal, the best plan, no doubt, is to apply caustic to it, treating the ulceration as you would treat an ulceration elsewhere which would not heal. Apply strong nitric acid, or, perhaps better still, the strong nitrate of mercury, a more certain caustic. Touching the surface with a glass rod or brush which has been dipped in the solution will often effectually check the unhealthy action, and may thus induce the parts to heal.

Whatever the form of ulceration may be, it may result in stricture. You may, it is said, have a stricture without previous ulceration. There may be such cases, and I believe there is one in this specimen which I shall have to refer to, having myself operated in the case by colotomy on account of stricture resulting from deposit in the wall of the rectum. In that case the scirrhous deposit in the wall never got to the stage of ulceration.

The most common form is where you have had ulceration of the mucous membrane ending in contraction and stricture. Of course, in the syphilitic cases, which are so common, you have more than in others the tendency to contraction. The female sex is more liable than the male to stricture and syphilitic ulcerations, for in a general hospital the number of females suffering from this affection is much larger than the number of males. Whether the syphilitic poison is infiltrated through the vaginal wall or not I cannot say. Certain it is that it seems to produce effects upon the lower bowel in the female which are comparatively unknown in the male.

We have, of course, the symptoms of stricture showing themselves in difficulty in the passage of the fæces. The contracted bowel gives rise to straining, and you find that the fæces are marked, flattened into a band, or broken off into pieces, and there is often more or less of a semi-purulent discharge. On examining the bowel you readily detect the stricture within reach of the finger. You find a contracted bowel, and that the walls are more or less roughened; perhaps ulceration is still going on. By gradually and steadily introducing the finger you may be able to pass through the stricture, and feel the bowel perfectly sound beyond. When it is perfectly sound, I have often noticed that the mucous membrane is tightened up, feeling quite different from the ordinary healthy rectum, drawn; as it were, into longitudinal bands, much more than is the healthy bowel.

The treatment of these cases must be, of course, in great part mechanical. You have to dilate the stricture, and also, if possible, to produce a certain amount of absorption of the tissue which has given rise to the stricture itself. With regard to mechanical treatment, we come to the use of bougies, which is not unattended with danger. A hard bougie should never be used; it should be softened by being dipped in hot water, and thus any damage to the bowel may be avoided. The surgeon should try first and find what size will go through, and carry out the treatment just as he would with a stricture of the urethra. You cannot be too gentle with either the one or the other.

If you have a very obstinate case of stricture of the rectum to deal with, you may have recourse, just as with stricture of the urethra, to some more speedy mode of dilatation. The two diseases are quite analogous. No one would use Holt's dilator unless the stricture were very obstinate; nor should I use this instrument—Armstrong Todd's rectal dilator—in a stricture which would dilate up to a good size. But one does meet with cases of stricture of the rectum which one cannot get on with at all, and there is no doubt that you can use this instrument, if you are careful, with very good effect. The blades of this dilator are parallel to one another, and are separated by an ingenious arrangement of cross bars worked by compressing the handles. Formerly it was found frequently to nip the mucous membrane, and often, in drawing it out, it would tear away a piece of the mucous membrane. The best plan to avoid this is to put over the dilator a finger-stall of india-rubber, which can be thoroughly greased. After the dilator is introduced, the blades can be separated so as thoroughly to stretch the stricture, and you may thus make great progress with the case. You cannot, however, be too careful with this plan of treatment. Accidents have occurred with it: one to myself. A death occurred which I attributed to the use of this instrument, although I had not an opportunity of making a post-mortem.

These cases are, I should say, excessively troublesome. You may do some good, but if the patients will not assist

you by passing bougies themselves the strictures soon contract, and are really almost incurable. It has become necessary, in some cases, even to do colotomy.*

Besides the simple stricture of the rectum, we have, of course, the cancerous strictures. These are either a scirrhous form of cancer of the bowel, or, occasionally, epithelioma. The latter is not common, but we see it every now and then; and if it is simple, affecting the anus itself, it is possible to treat it like epithelioma anywhere else, and cut it away. Of course this can only be done in the early cases which have made little progress; and you must leave the patient afterwards with a damaged anus, through which the fæces are pretty sure to pass incontinently.

The more common form is scirrhous disease, either in the bowel primarily or by extension from the uterus or the vagina.

I have here notes of two cases of cancerous stricture of the bowel. The symptoms were well marked in each, and here are the preparations belonging to them. Both proved fatal eventually, though in different ways. I will refer briefly to them because they give one a good idea of the course of such cases.

The first is that of a woman, aged forty-two, who had been married twenty-one years. Three years before she had felt pain in defecation, and had passed mucus and blood. Six weeks before she came here she had pain in the groin, and a surgeon told her she had scirrhus of the bowel. She applied here, and subsequently her friends used to come to fetch her medicine, but she never came. One day the friends came to say that she was dying from over-distension of the bowel, being able to pass no fæcal matter whatever. I had her brought into the hospital, and the next day performed colotomy, and she sank (though relieved for the time) a few days afterwards. Here is the specimen removed from that patient. Here is the artificial anus, and below it is the strictured portion of the bowel, scirrhus having infiltrated the wall, but not having yet reached the stage of ulceration.

The other case was more interesting because the patient remained a longer time under observation. She was forty-nine years of age, and had been healthy till the birth of her child, twenty-one years ago. Then she had inflammation and abscess opening into the bowel. Six months before admission she had constant inclination to go to stool, but could pass little. She then had no bleeding, but had pain. About three months before admission, after straining a good deal, she passed some blood and mucus. On examination there was found advanced disease of the upper part of the rectum; and, seeing that the disease must necessarily kill her and that she was suffering great pain, I strongly advised her to submit to colotomy at an early period rather than leave the disease to wear her out, and perhaps to end in obstruction, as in the former case. She consented, and I performed the operation of colotomy, which she survived for several months. The operation was performed on the 28th of January, and she died in the early part of August. It certainly prolonged her life, but she did not get the relief from her pain which I had hoped she would obtain. This was probably due to the fact that the disease also involved the uterus.

Given, then, a case of scirrhus of the bowel, what is to be done? Of course, it is impossible to dilate it: the question is, can anything be done to palliate it? A good deal can be done to palliate it, before the operation of colotomy, by means of opiate applications; starch-and-opium injections and suppositories will give great relief, and attention should be paid to the state of the bowel so as to avoid the accumulation of hardened fæces.

Every now and then we find cancerous masses protruding from the anus, which are exceedingly painful. During the last six months I have seen once or twice a gentleman who has suffered excessively from the protrusion of cancerous masses from the anus. You may destroy these or cut them off with the galvanic cautery. Ordinary scissors do very well. After the removal of one of these protruding cancerous masses there is not the contraction which there is after the removal of one of the ordinary folds.

Supposing the case has advanced to the stage of anything like obstruction, the patient being worn with pain, and every now and then getting obstinate constipation, I have no hesitation in recommending colotomy—Amussat's operation, opening the colon in the left loin. It is an exceedingly simple, if a large, operation, provided you go by one or two definite rules. In the first place, the question arises where the bowel lies. In the great majority of cases you will find the bowel almost certainly by taking the width of the ilium from the anterior superior spine to the posterior superior spine, and then half an inch behind the mid point between the two spines. That is a rule for which I am indebted to the surgeons of St. Mark's Hospital. Having carried it out often on the dead body, and on several occasions on the living body, I have had in this way no difficulty in finding the bowel. It is well to make an ink line to mark the spot when you have found it—half an inch behind the middle of the crest of the ilium. Then make an incision some four inches long across that line, two inches on each side midway between the last rib and the crest of the ilium, and cut steadily through the muscles there—the latissimus dorsi and external oblique and internal oblique beneath—till you come to the tendinous origin of the transversalis, which is quite recognisable. You may cut down till you come to that without any fear of doing harm. Having made an opening into it and introduced a director, lay open the fascia lumborum to the full extent of the incision, and you then come upon a quantity of loose fat. It does not matter how emaciated the patient may be, there is always some fat there. The next thing is to search for the bowel. A little displacement of the parts will show it to you; you can readily recognise it with your finger. The treatment of the bowel is of great importance. Where the obstruction has already occurred, and the bowel is over-distended, there is no necessity to inject. Where the bowel is not distended, it is very useful to inject it with warm water, though it is quite possible to reach it and open it satisfactorily when empty. If the bowel is distended, the surface uncovered by peritoneum is at once seen; but if the bowel is collapsed, it is necessary carefully to turn it round so as to bring the posterior surface into view, since it is there it should be opened.

It is important to make the incision into the bowel in the easiest and simplest way; and the best plan, I believe, is to take a large curved needle, and pass a stout silk thread through the bowel at the upper and lower margins of the incision. The ends of these threads are then passed through the skin on each side of the ink-mark, and the intestine is thus fixed. All that is necessary then is to make an incision transversely into the bowel, and to pass the finger in, getting hold of the loops of thread, and, having drawn them out, to cut the loops through and tie the four threads. The whole thing is accomplished in a few minutes; and it is usually necessary to stitch the extremities of the incision together in addition.

I now pass on to say a few words on certain subjects specially connected with the rectum in females.

The first is injury to the rectum in parturition. Every now and then in primiparæ, and especially in women advanced in years, when the head of the child is on the perineum, the perineum gives way. The tear may be simply in the perineum, or it may extend through the sphincter ani and lay open the rectum. This is of course very serious both for the patient and also sometimes for the doctor; but it is to be remedied, and usually remedied with success if the case is treated at once. You have a tear through the anterior part of the sphincter, and you have to bring the parts into apposition so that they may heal while fresh. The best plan is the ordinary method pursued for ruptured perineum with deep sutures. It is not necessary to have recourse to the old-fashioned quill suture, which is apt to give rise to ulceration by the pressure exerted upon the edges of the wound. Take an ordinary good, large, curved needle, and pass it in deeply on each side of the ruptured perineum, going well down to the bowel, or even into it. Use a good piece of thick wire, twist the ends together over the front, and get the parts drawn well together. You can leave these sutures in much longer than you can leave quilled sutures in, and with less damage to the skin and surrounding parts.

But if it is a case of rupture *into* the rectum you must do something more. It is no doubt owing to contraction of the sphincter ani that some of these cases do so badly. In former times, before the operation on the perineum, Mr.

* I have a patient now in hospital on whom I performed colotomy some weeks ago for syphilitic ulceration and stricture with great relief.

Copeland Hutchinson, a rather celebrated surgeon in his day, proposed to treat the cases simply by dividing the sphincter ani on each side. He was perfectly right in his view, and I believe he carried it out in one or two cases; and so also did Mr. Mayo. The patient lay afterwards with the legs bound together, and all fæces passed involuntarily out of the sphincter without the sphincter contracting; and they found that they did occasionally get the parts to unite. We have nowadays the method they practised, but, in addition, we put in deep sutures; and therefore, having done that, I advise you to pass the finger into the anus, and, with a blunt-pointed straight bistoury, to divide the sphincter on each side. It is not sufficient to divide it on one side, because the sphincter is really a double muscle. Keep the patient quiet and lock the bowels up with opium, and you will probably have a good result; at all events it is the best chance for the patient.

It unfortunately happens, however, that you do not always obtain a complete result. The patient recovers with an apparently sound perineum, but discovers that she passes fæces and flatus per vaginam. It is a very painful thing for a woman to find that flatus escapes without her will, for she is thereby shut out from society. Of course there must be a small fistula if simple flatus passes; if it be larger you have in addition fæcal matter passing through into the vagina, and thus escaping. We have of course here the condition known as recto-vaginal fistula, and it is easy enough to see, if large, by putting the patient into the lithotomy position. If minute, however, giving passage only to flatus, it is not always easy to find it. You may have to hunt for some time for it, as in the case of fistula in ano. Having found the fistula, the object is to close it. If minute, you can often effect this by using the wire made hot by a galvanic battery, but if large you must pare the edges and sew up the opening. My own personal experience is unsatisfactory, and surgeons who have had a more extended experience of recto-vaginal fistula find it a difficult thing to cure. The reason is this, that the tissues upon which you have to operate to get the raw surface to unite are so exceedingly thin that to pare them so as to get a broad raw surface to unite is very difficult to manage. I have notes of two cases that were operated on which were relieved, but I am sorry to say they were not cured. You will generally find that these operations need to be repeated three or four times or more before you can completely close the opening. Briefly, one case was this. The patient was a woman, aged twenty-three, having two children. Her first confinement was difficult; she was delivered by instruments, and ever since she has been able to get about she has found her motions passing by the vagina. I may remark here concerning the use of instruments, that both the surgeon and the instruments are often blamed unnecessarily. It is the common story, "Mr. So-and-so used instruments, and the woman has never been well since." It is not the fault of the surgeon, or of the instruments, but it is commonly the fault of an ignorant midwife who has allowed the head to rest so long upon the parts as to make them slough, as is seen also in vesico-vaginal fistula, a result which is more frequent than recto-vaginal. The woman came into the hospital, was operated on here, and was improved, but was not cured.

The other case was that of a woman aged thirty-one. In her first confinement her attendant put on the forceps, and in delivering the child the perineum was torn. He immediately put the parts together, and put deep sutures in, and treated the case *secundum artem*. But she had an opening into the rectum just above the sphincter, through which both fæces and flatus passed. I performed an operation on it with great care, making the edges of the fistula raw, and not merely paring the edges themselves, but taking a good broad piece off, and then bringing the surfaces together with sutures. It is very difficult to do it effectually, for there is a great tendency for it to break down again the first time the patient has a motion. This unfortunately happened in this patient. We locked up the bowels for some time, but they acted rather too soon, and we had all our work undone, and she is coming in again to have another operation performed.

One word on another form of fistula, exceedingly rare, connected with the bowel, and therefore to be mentioned here, although not strictly connected with the rectum. It is a communication between the bowel and the bladder occurring in the female. The bladder and bowel lie in close apposition in man, and any ulceration occurring in the lower bowel may readily establish a recto-vesical fistula. A communication between the bladder and rectum, or sigmoid flexure, in the female is, so far as I know, an exceedingly rare thing. I happen to have a case under my care, and will give some of the points connected with it because of its interest. The patient, aged forty-one, twelve years ago had her only child. It was still-born, and afterwards she had a pelvic abscess, which was opened externally, and was kept open for some time. She got well of that, and when in Paris, nine years ago, she found suddenly that she had great difficulty in micturition, and passed something resembling a slough, and immediately began to pass air and fæces by the bladder. She has been in that state ever since, and for nine years, more or less, fæces have passed through the bladder. Unfortunately, they often block up the urethra, and give rise to excruciating pain. In addition, the passage of fæcal matter has caused irritation and cystitis. I was asked to see if anything could be done. On going carefully into the case, it seemed that we had here the remains of the abscess, which sometimes became larger, and was evidently a cyst communicating with both bowel and bladder, and fæces constantly passed through, and no doubt urine regurgitated into the cyst. Being clearly in the lower part of the bowel, I had no hesitation in recommending colotomy in the left loin. I performed the operation five weeks ago, and she has got well without a bad symptom. Directly the colon was opened fæcal matter passed by the colon, and ceased to pass by the bladder. She was immediately relieved of all her symptoms, and only on one occasion has any piece of fæces passed through the bladder. I have no doubt that that was a small portion remaining in the rectum. For the last month she has been practically well, and with a proper bandage on the loin she is perfectly comfortable, and has only to remove that and evacuate the bowels as required. The relief which she has received has been most decided and most satisfactory.* Of course, you do occasionally get communications between the small intestine and the bladder, and to do colotomy in such cases would be of no advantage. By careful examination of the fæcal matter passed through the bladder, I came to the conclusion that it was really the upper part of the rectum, the lower part of the bowel, and not the small intestine, between which and the bladder the communication existed; and in similar cases I should strongly recommend colotomy to be performed.

ON THE SKIM-MILK TREATMENT OF DIABETES MELLITUS.

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IN a recent statement by Dr. Donkin of the principles of his method of treatment, which appeared in the pages of THE LANCET on the 11th January, it was alleged that the failures which had attended its employment in the hands of others were due to inattention to the rules laid down for its application. I must candidly own that, in having made the experiment on previous occasions, I had not followed to the letter the rules laid down by its originator, and it seemed to me only fair that, before pronouncing a final judgment on the merits of the plan, these rules should be strictly applied. It may have been my misfortune not to have found anyone whose opinion commanded respect, with the exception of Dr. Donkin, who had met with any success in resorting to the skim-milk treatment. In my own experience no benefit whatever had been obtained, and those with whom I have conversed on the subject were unanimous in the belief that it did more harm than good. I state this frankly and without reservation, that it may not be said that I had allowed any such prejudice unknown to myself to influence my judgment. The conclusion is simply the unavoidable result of the experiment, and if there be any fallacy in it, Dr. Donkin will do

* This patient is now in perfect health, sixteen months after the operation; and her case was read before the Clinical Society during the past session.

me a favour in pointing it out. Teachers of medicine are by their position bound to investigate new methods of treatment, and to lay before their students in unambiguous terms the results of their inquiries.

Shortly after the appearance of the paper to which I have referred, a case was admitted under my care at St. George's Hospital, and, calling the attention of the students to the alleged cause of failure in previous trials, I told them that it was my intention to adhere most strictly to the directions given, and to publish the results, whether favourable or unfavourable to the skim-milk treatment. My patient was a remarkably intelligent man, and the nurse of the ward in which he was placed a person in whom full confidence could be reposed. It was nothing new to her to see cases of diabetes treated with skim milk, and she, too, was told why any fresh experiment was necessary, very strict rules being laid down as to the management of the case. The first thing to be done was to ascertain the usual amount and the specific gravity of the urine passed in twenty-four hours when resting in the hospital and taking the ordinary diet, which consisted of tea, sugar, bread and butter, four ounces of cooked meat, half a pint of porter, and potatoes, with the addition of a pint of milk. Next, the skim-milk treatment was adopted, and after a few days' interval the urine was again collected and tested. Finally, the ordinary dietetic treatment was had recourse to, and the observations on the urine continued.

The history of the case as recorded by my clinical clerk, Mr. J. Scatliff, is as follows:—

G. G——, aged forty-two, was admitted into St. George's Hospital on January 15th, 1873; grocer's assistant; married; a spare man with rather a florid aspect, who stated that with the exception of an attack of "pleurisy," which confined him to his bed for a fortnight some years ago, he had always enjoyed good health. Three months prior to his admission he noticed that he suffered from an unusual degree of thirst, that his skin was inclined to be dry and parched, and that he scarcely ever perspired. He also passed an increased quantity of urine. He had lost about a stone in weight since the commencement of his illness, and attributed his feeling of weakness to overwork. His tongue was furred, bowels acted regularly, pulse quiet, and organs generally healthy. He was ordered to have the ordinary diet of the hospital, with a pint of milk in addition.

On Jan. 22nd six pints of skim-milk were prescribed to be taken at regular intervals in place of his usual meals, and no other food was given. On the 27th he stated that his hunger was not appeased by the quantity of milk allowed, and asked to have two more pints; the eight pints to be taken, as before, at stated times. The quantity of urine having increased to nearly double the amount passed during the first week of his stay in the hospital, with only a slight diminution of the specific gravity, the treatment was abandoned on the tenth day. On the 31st he was ordered a mutton chop for breakfast, 6 oz. of cooked meat for dinner, with greens, six bran biscuits in the course of the day, and 4 oz. of brandy. On Feb. 7th, at his own request, two more bran biscuits were given. On the 21st he was ordered 5 gr. of compound soap pill night and morning, and on the 28th his diet was increased by the addition of two eggs. The urine had now fallen to about two-thirds of the quantity passed when he was first admitted, but the specific gravity was somewhat higher. One of the pills was omitted on the 3rd of March, and the other on the 7th. On the 10th, the quantity of urine continuing small and the specific gravity having fallen as low as when he was taking the skim milk and nearly three times the amount was passed, he was permitted to have captain's biscuits in place of bran. This was followed by an immediate rise both in quantity and specific gravity, and on the 14th he was again placed on the more rigorous diet, and the pills were resumed.

He was now becoming very anxious to leave the hospital, and he was discharged on the 31st of March, taking a box of pills with him, and promising to continue the prescribed diet.

It should be stated that his weight varied several pounds during the time that he was under treatment; but that he had, on the whole, rather lost than gained flesh during the two months and a half that he was in the hospital. The highest weight recorded was on the 5th of March, when the quantity and specific gravity of his urine was at a minimum, and after the addition of the eggs was made to his diet. Throughout the treatment he never required any aperient.

Three days' average while the patient was under no treatment, and living on the ordinary hospital diet, gave the following results with reference to the urine. The quantity passed in twenty-four hours was 89 oz., with a specific gravity of 1046. Three days' average at the conclusion of the skim-milk treatment indicated 150 oz. of urine passed daily, having a specific gravity of 1043. At the end of three weeks, dietetic treatment was adopted, excluding all sugar and starchy food as far as possible. Three days' average during this period gave as the quantity of urine passed in the twenty-four hours only 63 oz., having a specific gravity of 1046. When in addition to this a grain of opium had been taken night and morning for a week, the three days' average quantity of urine was reduced to 50 oz. per diem, with a specific gravity of 1048. Later, one grain of opium only being taken in the twenty-four hours, the three days' average gave 63 oz. as the quantity of urine passed, the specific gravity having fallen to 1044. The abandonment of the opium at this stage did not seem to affect the secretion at all, as the next three days gave an average of 54 oz. of urine, having a specific gravity of 1043. Next day captain's biscuits were substituted for bran biscuits, with the immediate result of increasing the quantity and specific gravity of the urine; the average amount during the three days they were allowed having been 77 oz., and the specific gravity 1046.

The same course of treatment was once more passed through, and when the opium was again ordered to be left off the average obtained was 60 oz. of urine of a specific gravity of 1045. He left the hospital so soon after this that there was no opportunity of ascertaining the condition of the urine after the opium was discontinued; but I believe it had slightly increased in quantity. I have taken averages of three days just prior to any change being effected in his diet or medicine, as giving on the whole a fair view of the progress of the case. But it must be remembered that in the treatment of diabetes there are many unknown circumstances which cause very considerable variations, both in the quantity and specific gravity of the urine, and single days might be picked out at any period of the case in which the actual numbers deviate very much from the average. Still these are easily seen to be exceptional, the exception being often more apparent than real; a high specific gravity counterbalancing a small amount of secretion, or an abundant secretion having a low specific gravity. Bearing this in mind, we may view the case in another way, and inquire what were the minimum and maximum of waste in twenty-four hours by the urinary secretion during each of the periods just referred to. Under ordinary diet the minimum was 1894 gr. and the maximum 2112 gr. Under the skim-milk treatment they were respectively 2621 gr. and 3672 gr. The diet excluding sugar and starch brought down the minimum to 1325 gr., and the maximum to 2174 gr. Under the opium treatment the minimum obtained was 902 gr., and the maximum 1546 gr.

Did this case stand alone, it would be unfair to condemn the skim-milk treatment upon these results, however unfavourable they may seem. As already stated, the observation was only made with a view of ascertaining whether previous repeated failures might not have been due to a misdirected employment of the remedy; but after numerous experiments I confess myself utterly unable to explain how Dr. Donkin has arrived at the results he has laid before the profession, except on the assumption that his favourable cases belonged to the well-known class of transient glycosuria, and were not genuine diabetics. In fact, in his last paper he admits the existence of intractable cases, or, in other words, the existence of diabetes over which the skim milk has no influence; and, in the absence of proof to the contrary, it may be assumed that the recoveries were not necessarily due to the treatment at all.

In genuine diabetes my experience coincides with the results of the single case now related in detail. The quantity of fluid passed through the kidneys when six or eight pints of skim milk are consumed in the day, the diminution of saccharine material introduced and the absence of starchy food, all tend to lower the specific gravity of the urine; but the increase in its amount more than counterbalances any apparent good resulting from this circumstance, and produces on the whole a greater waste of tissue

than when ordinary diet is employed. On the other hand, when the diet is so regulated as to reduce the starchy and saccharine food to a minimum, and to allow as little fluid as possible to be absorbed, a great reduction in the waste of tissue results. Again, there seems to be no doubt that the administration of opium will for a time at least cause a still further diminution of waste; and, when the minimum has been reached, the opium may be gradually left off without any necessary increase. Occasionally it is possible afterwards to permit a certain quantity of thoroughly cooked starch, such as captain's biscuits, to be substituted for the bran biscuits or gluten bread which have been used, without provoking a return of the high specific gravity and excessive quantity of urine previously secreted. In the case just detailed this attempt failed, and the strict diet had to be again enforced. When this is the case the prognosis is unfavourable; and I would venture to add that the continued administration of opium offers no prospect of really holding in check such forms of disease. The place which I should assign to it in the treatment of diabetes is that of subserving a temporary exigency and reducing the waste to a minimum. As soon as this is reached it may safely be dispensed with until some accidental circumstance has again raised the quantity and specific gravity of the urine, when it may once more be had recourse to with advantage. For this purpose it does not appear that the dose need be very large; an excessive quantity, or too long continuance of its employment, seems to weaken its influence without any corresponding benefit in proportion either to the quantity administered or the period for which it is given. As we have not yet arrived at the true pathology of diabetes, any contribution to its empirical treatment must have some value, even when the conclusions arrived at are not altogether unassailable.

Bruton-street, W.

ON THE ANTISEPTIC SYSTEM,

AS SEEN IN PROFESSOR LISTER'S WARDS AT EDINBURGH.

BY RICKMAN J. GODLEE, B.S.,

SURGICAL REGISTRAR AT UNIVERSITY COLLEGE HOSPITAL.

(*Concluded from page* 695.)

THE result of providing an insufficient exit for the discharge is the occurrence of tension from its accumulation in the wound, and this tension gives rise to a degree of inflammation that not only causes a considerable increase in the amount of serum thrown out, but may even lead on to suppuration. This was well illustrated in the case of J. McB——, who was admitted under Mr. Lister's care with an ununited fracture of the shaft of the humerus of some months' standing. The operation, which took place on Feb. 12th, 1873, was, owing to the obliquity of the fracture, a very tedious one, and involved a very free handling of the soft parts. After the ends of the fragments were removed, they were firmly brought together by a piece of stout silver wire passed through holes drilled in them, the ends of which were tightly twisted together and left exposed in the wound. Contrary to Mr. Lister's general custom, sutures were then applied in the upper half of the incision. The amount of serum thrown out during the first twenty-four hours was very great, and, as it did not find a sufficiently free exit, a small amount of inflammation was set up, which was indicated by a slight blush round the wound on the second day, and on the third by a little pus which could be squeezed from the deeper parts. This increased somewhat in amount in the few following days, but remained free from putrefactive odour, the silver wire in the wound being quite untarnished, and the man suffering no constitutional disturbance whatever. The subsequent progress has, I am informed, been in all respects satisfactory.

The consideration of this case leads to the observation that it is a great mistake to suppose that in none of Mr. Lister's cases does suppuration occur, and still greater for any surgeon to relinquish the antiseptic treatment of a wound the moment a speck of pus appears in it. Mr. Lister lays great stress on the fact that suppuration may be caused by any abnormal stimulus whatever, whether the indirect or nervous, as in ordinary inflammation, or by the direct action of a chemical irritant, the latter class including that which results from the stimulation of an antiseptic salt as well as that which is caused by the products of putrefaction. It is obvious that it is the occurrence of putrefactive suppuration alone that involves the failure of the antiseptic treatment. Suppuration, as the result of direct stimulation, far from being the exception, is seen in every granulating sore treated antiseptically, its amount being dependent on the frequency of the dressing and the strength of the lotion used, as well as on the fact that where carbolic acid is employed, the present protective does not form a perfect obstacle to its passage from the dressing to the surface of the wound. The innocuous character of the pus thus generated under the stimulus of an antiseptic salt is well illustrated in the process of skin-grafting, which in Mr. Lister's hands has attained a state of great perfection. The granulating surface to be operated on is first freed from putrefaction by careful dressing with carbolic or boracic acid for some days previously (the use of the protective being in this case of course dispensed with), and the part from which the grafts are to be taken is also purified by washing with a solution of carbolic acid. A small piece of epidermis is then raised with a sharp scalpel passed only just sufficiently deep to draw blood, and divided on the thumb-nail (which has been washed with boracic lotion) into pieces not larger than a small pin's head; these are placed on the granulating surface, which is covered with a dressing of protective and boracic lint. During this process and at subsequent changings of the dressing, boracic lotion is used in the form of a spray, so that the small grafts may not be disturbed by the flow of liquid over them. In this way twenty-one grafts were in one case obtained from a shaving not larger than half a threepenny-piece, and I am informed that out of such a number nearly all may be expected to succeed. One cannot help being struck by the difference in the behaviour of the epidermis when bathed in this harmless pus from that which occurs in the acrid putrid material which collects during the first four days under the isinglass plaster in the process originally recommended by M. Reverdin.

Some of the most striking results of the treatment are obtained in cases of compound fracture and in amputations. The management of the former has been already so fully described* that no further comment is needed; but I may mention one point of detail which overcomes, at least in part, the difficulty often experienced in the preliminary injection of a wound the orifice of which is of large size. Under such circumstances, it is impossible to hold its edges round the nozzle of the syringe, and without doing this it will be found very difficult to ensure a thorough penetration of the lotion. To meet this, Mr. Lister now makes use of a small gum-elastic catheter attached by an india-rubber tube to the syringe, by inserting which as far as possible into the recesses of the wound a very complete result is obtained. This proved invaluable in the case of T. F——, who was admitted on March 1st, 1873, with a very severe contusion of the foot and a large lacerated wound on its inner side, produced by the wheel of a railway waggon. The skin was much undermined in all directions, so that the finger could be passed round from the wound almost to the outer side of the sole, where, as was afterwards discovered, an extensive loss of vitality had taken place; while, at the same time, a small superficial slough appeared on the outer side of the dorsum; one of the metatarsal bones was also broken. Eight days after admission no suppuration had occurred, though Mr. Lister anticipated that the necessarily frequent changing of the dressing would ultimately give rise to it; part of the original blood-clot, then of a brilliant orange colour, was still in the wound; the slough in the sole had been incised and partly removed, but neither in its vicinity nor in that of the one on the dorsum was there the slightest redness or inflammation: and since that time, I am told, the case has progressed most favourably.

The only other compound fracture that I had the opportunity of seeing was one of the shaft of the humerus in a lad, fourteen years of age, who was admitted on Dec. 11th, 1872. It was accompanied by such severe injury of the

* Remarks on a Case of Compound Dislocation of the Ankle, &c. By J. Lister, F.R.S. Edmonston and Douglas. 1870.

vessels that, on admission, the hand was cold, and no radial pulse could be felt, nor did this, indeed, return before Feb. 2nd, 1873. In fact, the propriety of attempting to save the limb appeared at first doubtful; but under the ordinary plan of antiseptic treatment in such cases, firm union took place, though a sinus still communicates with some necrosed bone at the seat of injury. The original wound was healed by Feb. 16th.

During my attendance in Mr. Lister's wards, besides a primary of the hip-joint, only four major amputations were performed, three of which healed without a drop of pus or the slightest constitutional disturbance. I subjoin the dates at which the dressings were changed in each of them. These facts speak for themselves, and show not only how rapid is the cure in successful cases, but how much trouble is saved to the surgeon and his assistants.

W. B——, an adult man. Amputation of arm for ununited fracture of old standing. Operation Jan. 13th. Dressings changed Jan. 14th, 16th, 19th, 23rd, and 30th, and removed Feb. 6th. It was really healed by Jan. 30th.

J. B——, an adult man. Syme's amputation for injury (primary). Operation Feb. 9th. Dressings changed Feb. 10th, 12th, 15th, 20th, 27th, and March 6th and 15th.

W. W——, an adult man. Amputation of the forearm for disease of the wrist-joint, which had been previously cauterised and antiseptically incised, but, though painless and discharging only a very small quantity of serum, was rapidly reducing the patient's strength. He was also suffering from incipient phthisis; but immediately after the operation his appetite returned and he began to gain weight. Operation Feb. 11th. Dressings changed Feb. 12th, 15th, 22nd, and removed Feb. 29th. It was really healed on Feb. 22nd.

The other amputation was at the ankle in J. W——, a youth of eighteen years, for advanced disease of the synovial membrane. It, like the others, had almost healed at the end of a fortnight without a trace of suppuration, and as the only cavity left was that occupied by the drainage-tube, Mr. Lister departed from his general rule, and substituted a boracic-acid for a carbolic-acid dressing before the sore was perfectly superficial. After this had been applied for six days, it became clear that the discharge which had soaked through the boracic lint had putrefied, and as decomposition spread into the interior of the wound it soon gave rise to extensive suppuration, with swelling, and breaking down of the newly-formed tissue in the heel flap. The stump is not yet healed.

Of three excisions which occurred during my visit, one was of the knee in a boy thirteen years of age, for osseous anchylosis the result of old disease, in which, as in the two following cases, the fact of the skin being unbroken gave full opportunity for carrying out the antiseptic treatment. Mr. Lister removed only just sufficient of the bones to enable him to straighten the limb, for which purpose the outer hamstring had to be divided during the operation. A posterior Gooch's splint extending from the gluteal fold to the heel was thickly padded with cotton-wool covered with boracic lint above and below the knee, and, to protect this from being soiled by the discharge soaking through the dressing, a piece of thin macintosh cloth was placed over it behind the knee, and for some distance beyond, both upwards and downwards. The whole was bandaged to the limb, and the day after the operation fixed in position by plaster-of-Paris. No permanent padding was placed behind the knee, but at each changing of the dressing, the space which existed at this part between the limb and the macintosh cloth was stuffed with gauze, which answered the double purpose of extending the dressing at the posterior aspect of the leg and giving support to the joint. Healing took place without a drop of pus in three weeks. I give below the dates at which the dressings were changed. Operation January 22nd; dressings changed January 23rd, 24th, 26th, 28th, February 2nd, 9th, and 15th, when it was found that no discharge whatever had taken place since the preceding changing of the dressing.

The other two excisions were of elbow-joints, in boys of eleven and fourteen years respectively, for anchylosis the result of injury. In these there was some suppuration from tension, but putrefaction did not occur, and healing was complete at the end of eight weeks in the former, and nine in the latter case. In the foregoing operations, as in all Mr. Lister's cases, the bleeding vessels were secured by the prepared catgut ligature.

In the treatment of abscess, unless the curdy condition of the pus renders it impossible, Mr. Lister now makes an incision only sufficiently large to admit a drainage-tube of suitable size, and this is found quite adequate to the purpose, for when the granulations which form the so-called pyogenic membrane are relieved from one cause which excites them to suppurate—namely, tension,—without the substitution of another in the shape of putrefaction, they cease to form pus, but the discharge assumes a serous character on the second day, and gradually diminishes in amount to the end of the case. The course of an abscess connected with disease of bone is commonly tedious; but the discharge, if rest be maintained, is serous after the first opening, and soon becomes trifling in amount, and if no putrefaction occurs, the general health remains unaffected, and an ultimate cure may be confidently expected. Thus, C. L——, a man somewhat advanced in age, has just left the infirmary who had been an inmate for two years, suffering from a lumbar abscess connected with caries of the spine. It was opened and dressed antiseptically, and, following the usual course in such cases, the discharge gradually diminished in amount, and ultimately the sinus closed. After this the patient was kept in bed for six weeks, and then allowed to assume the erect posture for a short period every day, but with the result of the re-formation of the abscess after some time had elapsed. This, which was treated like the first, had been, when I saw the patient, for many weeks healed, and he was allowed to get up for a quarter of an hour every day, wearing a metallic support for the spine, and since then he has remained apparently well.* I may mention, also, the case of E. J——, a young woman about twenty-three years of age, who was admitted in August, 1872, suffering from acute suppuration of the hip-joint. An abscess, which extended some distance down the thigh, was treated antiseptically, and a long splint applied to the limb. During the time that she was under my observation, the abscess had been for some weeks healed, but the splint was still applied, and she complained only of slight and very occasional pains in the joint. She has since left the hospital cured.

In the simple acute or chronic abscess the progress is generally very rapid. A good example of such a case is that of J. B——, a lady's maid, in whose neck Mr. Lister opened an abscess of the size of a large orange, of two years' standing, and possibly originating in a gland. The incision was made with a tenotome, and admitted a drainage-tube of one-eighth of an inch diameter. The discharge was serous on the second day, and on the eleventh healing was complete, though some old inflammatory thickening of the part remained. It is unnecessary to say that no visible scar resulted from the puncture.

The introduction of an additional safeguard has lately been induced by the failure in two cases to prevent putrefaction, though the utmost care was observed in the dressing. One was that of an abscess by the side of the knee-joint, which had previously been treated in the same wards, and had then healed after remaining eleven months free from decomposition, but putrefied two days after the second opening; the other was an excision of the mamma, in which a similar result occurred. The probable explanation of these facts is, that the small amount of carbolic acid given off from the gauze at the temperature of the air is insufficient to destroy immediately the organisms adherent to the larger particles of dust which may accidentally fall upon it; and any of these particles applied directly to such of the blood or pus at the mouth of the wound as may afterwards regurgitate into it, would very probably be the cause of putrefaction arising in the interior. To guard against this danger, it has been the custom to prepare the dressings the day before they were used, and to keep them folded with the layer that is to be applied to the wound inwards, by which it was anticipated that the mischief on its surface would be corrected. But even if this be done, it is clearly possible for dust to fall upon the gauze at the moment of application, and by its presence greatly to endanger the result. A simple and perfectly trustworthy plan of overcoming the difficulty is to moisten the innermost layer of the dressing with the spray or lotion, or to apply a loose piece of gauze soaked in the lotion beneath the general covering,

* Since writing the above, I have heard that this patient presented himself a short time ago at the infirmary, and reported that he is now up almost all day, but that he could not be so were it not for the support which he still wears.

the latter plan having the advantage of fixing the protective in position, and applying itself accurately to the part.

I have only now to add a few remarks on the subject of the spray-producer. Besides that worked by the hand, and the large and somewhat cumbrous machine which was exhibited by Mr. Lister at the British Medical Association at Plymouth in 1871, and which is used for all the larger operations in the infirmary, a spray-producer has been lately made, in which, while it acts upon the same principle as the two others, the bellows is worked by the foot instead of by the hand. It consists of a flat bottle, adapted to fit the pocket, which, with the bellows, rests on the ground, while the air and water are conducted in separate but contiguous india-rubber tubes, six feet in length, to the small nozzle which is held in the hand, by means of which the direction of the spray may be shifted with the greatest readiness. A small movable metal cap is provided for the protection of the points at which the spray is generated; and if a piece of muslin be tied over the tube leading to the bellows, so that all the air entering may be roughly filtered, the whole will be found extremely convenient, especially in private practice, as it enables the surgeon to change most ordinary dressings single-handed.

SOME POINTS IN THE THERAPEUTICS OF GELSEMINUM SEMPERVIRENS.

BY J. WICKHAM LEGG, M.D.,
CASUALTY PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL.

GELSEMINUM SEMPERVIRENS is a plant growing in the Southern States of North America. Its active properties were discovered by accident. It has been for many years past used in America, chiefly by irregular practitioners. A few months ago I happened to hear of its being employed with very great success in a case of pains in the jaw from decayed teeth, and I determined to make some inquiry into its therapeutical virtues. Mr. Jeffs, the apothecary of St. Bartholomew's Hospital, very kindly prepared for me a tincture by macerating for a week an ounce of the root with eight ounces of proof spirit. All the following observations were made with this preparation.

The cases in which I have found this drug of most use are those of bad toothache, which the patients themselves, and even some practitioners, call neuralgia. Short notes of some of these cases follow.

Mary L——, seventeen years old, came March 10th, 1873, complaining of shooting pains in the right side of the face, which had lasted for nine weeks. There were many decayed teeth. She had taken citrate of iron with benefit, but the pains returned when the medicine was left off. Ordered to take ten minims of the tincture of gelseminum in water every three hours. Came on March 13th, saying that the pains had ceased completely the day following the first administration of the drug. To take now instead the quassia-and-iron mixture of the hospital.

Emma B——, aged twenty, came on Jan. 6th, 1873, complaining of pain in the lower and upper jaws, lasting three weeks, and in the head. Last night had no sleep. The pains last two or three hours and then cease. Many decayed teeth in both jaws. To take fifteen minims of the tincture of gelseminum, in water, every three hours.—Jan. 9th: Pains much relieved; eating brings them on again, as "it strikes cold." To continue the gelseminum.

Richard T——, aged fifty-three, came on March 22nd, 1873, complaining of shooting pains in the upper jaw since Christmas, coming on about four o'clock every day and lasting till midnight; many decayed teeth. To take twenty minims of tincture of gelseminum, in water, every three hours.—March 26th: Pains ceased on the afternoon of the 23rd of March, the day after the first visit. To take the quassia-and-iron mixture three times daily.

Fanny S——, aged thirty-eight, came on March 24th, 1873, complaining of pains in the face lasting for fourteen days; throbbing, paroxysmal; gums swollen; many decayed teeth. To take twenty minims of tincture of gelseminum, in water, every three hours. She came again on March 27th, saying the pains were bad all the night of the 24th, but ceased on the 25th, and had not returned. She now only feels weak. To take the quassia-and-iron mixture.

These are four cases taken at random out of twelve others of the same nature. In nearly all these the patients said they found relief on the same day; the rest were better after a longer use of the medicine. In one case, however, of true neuralgia or tic douloureux, in a woman aged forty-two, treated towards the end of last December, no relief was obtained with gelseminum or the hydrate of croton chloral. Great difficulty was found in keeping the twelve patients mentioned above under observation; in only two cases did they come a third time to the hospital, so that no further history of them can be given.

In cases of chronic rheumatism I have not found the drug to be nearly so useful. I wish, however, to record the particulars of one case, because the improvement does not seem to be coincident with a natural ending of the disease, and because the improvement has been maintained.

James S——, aged fifty-five, came on March 26th suffering from rheumatic pains for the last five years. He says he has "excruciating pains" which pass from the feet up to the middle of the thigh. These pains are always worse at night, so that he spends the greater part of the night walking about the room. He was ordered twenty minims of the tincture of gelseminum every three hours in water. He came again on April 2nd, saying that the pains were greatly diminished, although he still feels them in the feet. But he says he has not had such easy nights for years as during the past week. He was ordered to take the gelseminum only three times a day. He came again on April 9th and 23rd, going on favourably.

In another case of much the same character, a little relief was given; but in all the other cases in which it was tried no benefit could be attributed to the gelseminum. I have not found it of marked service in lumbago, sciatica, pleurodynia, or other pains which we are accustomed to call rheumatic. I have had no opportunity of employing it in acute rheumatism, although I have heard of a case in which the pain was greatly relieved after its administration.

The drug now brought under the notice of the profession has very active properties. Happily, no instance of death is known even in cases in which great quantities of the drug have been given by mistake. It may very likely prove of service in allaying the pain in various other disorders besides those just mentioned, but hitherto I have had no opportunity of any further investigation.

Green-street, W.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

TUMOUR OF THE SUPERIOR MAXILLA; REMOVAL; RAPID RECOVERY.

(Under the care of Mr. T. SMITH.)

THE following notes, supplied to us by Mr. Cripps, house-surgeon, are of interest as showing the rapid recovery and little constitutional disturbance following removal of the superior maxillary bone.

H. W——, aged twenty-six, six years ago had a tumour, which was supposed to be myeloid, removed from the right upper jaw. In 1870 the part again became painful at times; and early in the following year she noticed a return of the growth, which had gradually increased in size, and on the 8th of January of this year presented the following appearance:—The right cheek was prominent, giving this side of the face the appearance of a slight general swelling, the eyeball on this side being slightly pushed forward. The upper molar teeth, which were perfectly sound, were somewhat separated from each other, the alveolar border in this portion being considerably hypertrophied. On placing the finger beneath the lip on the front wall of the antrum, a

prominent swelling could be felt. The roof of the mouth retained its normal concavity. The patient complained of a constant aching pain, which during the last two months had almost deprived her of sleep.

On January 12th the superior maxillary bone was removed by Mr. Thomas Smith. No ligatures were used, the hæmorrhage, which was free, being stopped by dry lint plugs. The external parts were brought together by a continuous horsehair suture, and a couple of harelip pins were used for the lip. She slept several hours on the night of the operation. The lint plugs were removed on the third day. On the eighth day she was out of bed, and left the hospital ten days later.

With the exception that, on the fourth day, the temperature rose to 103·5°, followed by a slight blush round the wound, her temperature never exceeded 101°. On the 3rd of April the hole in the palate was about the size of a penny-piece, and the voice was perfectly natural. There was remarkably little deformity, a general want of expression and a slight swelling of the lower eyelid being all that was most apparent. The two incisor teeth on this side were spared in the operation.

On a section being made through the bone, the antrum was found entirely filled by a firm fibrous growth, which had sprung from the floor, to which it was firmly attached. Although in close contact with the sides of the antrum, the tumour was not adherent in any other part; it had, however, penetrated a short distance into one or two of the canals.

GUY'S HOSPITAL.

TWO CASES OF STAB OF THE ABDOMEN; PROTRUSION OF OMENTUM; RECOVERY.

(Under the care of Mr. BRYANT.)

THE following cases (for the notes of which we are indebted to Mr. D. T. Evans) illustrate the advantage of securing rest to the abdominal parietes and to the viscera after the edges of the wound have been brought together. Rest to the muscular walls may be obtained by relaxing them, and the viscera may be kept in a tranquil state by small and frequent doses of opium; and it is especially important to prevent any action of the bowels for several days after the accident if the intestines be injured. Attention being paid to these precautions there is not much danger attendant on an ordinary case of wound of the abdomen.

A. N——, a leather-dresser, aged seventeen, while at work on April 15th, 1872, accidently stabbed himself in the abdomen. On admission into the hospital shortly after the accident a punctured wound was found to the right and a little below the umbilicus, allowing of the escape of about four inches of omentum, but no injury of the intestine was detected. The protruding omentum was replaced, and the edges of the wound brought together by sutures, and the patient placed in bed. Ordered one grain of opium every four hours.

April 17th.—Pulse 94; temperature 101·8°; bowels have not been opened; takes iced milk. Opium to be given three times a day.

20th.—Bowels not yet opened. Pulse 96; temperature 100·6°. Sutures removed.

21st.—Wound discharges a little fetid matter. Temperature and pulse normal.

24th.—Bowels opened this morning for the first time.

26th.—Takes fish and other light meat.

May 1st.—Slight discharge from the wound. Poultices applied.

3rd.—Bowels freely open. Patient feels comfortable.

6th.—Opium to be taken only once a day.

24th.—Complained of pain and spasms over lower part of abdomen, which passed off in a few hours.

June 12th.—Troubled with flatulence.

17th.—Out of bed, and walks about.

21st.—Discharged well.

W. R——, aged thirteen, was on August 28th, 1872, quarreling with another boy, who stabbed him in the abdomen with a knife. On admission into the hospital, a quarter of an hour after the injury, a wound one inch in length was found to the left of the umbilicus. A piece of omentum as large as a walnut protruded from the wound, but there was very little blood. The omentum was at once returned and the edges of the wound brought together by sutures and supported by a pad and a bandage, and a bag of ice was suspended over all. Ordered an eighth of a grain of morphia every eight hours. Two hours after the accident the temperature and pulse were normal, and there was no pain.

Aug. 29th.—Slept well; no pain; temperature and pulse normal. Milk diet only.

Sept. 2nd.—Temperature and pulse normal. Ice-bag removed, wound having healed by first intention. Water dressing applied. Bowels open for first time.

4th.—Morphia to be discontinued.

8th.—All dressing to be left off.

11th.—Patient discharged well.

CHARING-CROSS HOSPITAL.

PERINEAL SECTION AFTER RUPTURE OF URETHRA; RECOVERY.

(Under the care of Mr. BELLAMY.)

THIS patient had originally been in the hospital for rupture of the urethra (*vide* THE LANCET, Nov. 16th, 1872). The urine had been coming away fairly well by the penis, and in great measure by the perineum, when on November 1st the patient complained of severe pain in the region of the perineum. There was great difficulty in passing a catheter, and indeed it appeared to pass into a cul-de-sac caused by cicatrisation and contraction of the seat of injury to the urethra, about the triangular ligament. He had symptoms of deep-seated suppuration, and pus passed per urethram. The perineum was hard and brawny, and but little urine issued by the perineal wound, and none whatever by the urethra.

On Nov. 5th Mr. Bellamy determined at the time of opening the deep-seated abscess to obtain the proper channel for the urine by perineal section. He accordingly passed a No. 7 silver catheter down to this cul-de-sac, and made a free incision, in the central line of the perineum, through the toughened, brawny cicatrices, the point of the catheter and the tip of the left forefinger being made to meet exactly in the mesial line of the triangular ligament, and opposite to where the true urethral canal was supposed to be. A touch of the knife freed the deeply cicatrised tissues; and by passing, next, the first and second fingers of the left hand into the rectum, the prostate was lifted upwards and forwards towards the end of the catheter, when it slipped readily into the bladder. A great quantity of pus was evacuated. The instrument was retained.

On Nov. 6th the patient was very well, and the urine was coming out by the catheter, slightly by the side of it, and through the perineal wound. On the 13th the urine passed chiefly by the catheter and very little by the wound, which was healing fast. The instrument was removed on the 18th; its surface showed a singular oxidised impression of that portion of the urethra which was healthy, and of the extent of the new tissue which was being formed into the new urinary passage near the bulb. On the 17th the urine came away entirely by the urethra, and he left the hospital about the middle of December, passing a full stream and having no symptom of contraction. He was then taught how to pass a gum-elastic catheter for himself.

EYE AND EAR INSTITUTE, BALTIMORE, U.S.A.

CASES SHOWING THE VALUE OF STRYCHNIA IN OPTIC NERVE ATROPHY.

(Under the care of Professor JULIAN CHISOLM.)

THE following well-observed cases are of great value as showing the good that may be done in apparently hopeless cases of atrophy of the optic nerves by the use of strychnia.

M. W. W——, aged fifty-seven, found his sight becoming very rapidly defective during the past six months. He had for some years worn glasses, which recently he had been compelled to change often. The last used were ten inches convex, but these no longer serve him in reading even coarse print. Stronger glasses were equally inefficient in clearing up or sharpening vision. Both eyes were equally faulty. He

read No. 18 Jaeger's test-types at one foot only. With the optometer, with ten inches convex lens, he could not make out a large print text at any distance. His general health was good. An ophthalmoscopic examination revealed pale discs. For many years he had used in excess tobacco and whisky. The disease by exclusion was diagnosed tobacco amaurosis, and the following course of treatment instituted: (1) To abstain absolutely from the use of tobacco and whisky; and (2) to use strychnia, commencing with one-thirtieth of a grain of sulphate of strychnia three times a day after meals, and increase slowly the quantity at each dose as the system became accustomed to the drug, until one-third to half a grain could be taken daily. The strychnia was kept up in these large doses for three months, at the end of which time vision appeared to be perfectly restored. At the end of two months he could see to read sufficiently well to resume the active duties of a merchant, which occupation he had to withdraw from on account of failing vision. The patient was examined four months after the treatment had been instituted. With a ten-inch convex lens he could readily read "brilliant" of Jaeger's test-types, which at his age is perfect vision. He had given up tobacco from the day of prohibition, but with whisky he had not been so successful.

Mrs. J. S. G——, aged thirty-one, eighteen months ago was seized with intense pain in the right eye and side of the head. With this suffering sight was speedily lost, so that in four days from perfect vision she lost even the perception of light. It was three weeks before the pains disappeared from the eye and temple, but sight never returned. Vision in the left eye remained good until her last confinement six months since, when after labour a severe pain occurred in the left eye, sight became rapidly defective, and in a few days was altogether lost. When brought to the institute six weeks after the birth of her child, she was found to be totally blind, with dilated pupils and with the stare of an amaurotic. An ophthalmoscopic examination revealed whiteness of the right optic disc with shrunken vessels, the outline of the disc being well defined but irregular. The disc in the left eye was woolly, with misty outlines. In neither eye could she detect the strong reflected light of the ophthalmoscopic mirror. She was very feeble and anæmic. The treatment prescribed was iron and bark tonics, also the sixteenth of a grain of the bichloride of mercury, with five grains of iodide of potassium, three times a day. The mercurial course was continued for only a week, when it was discontinued, and in addition to the tonics strychnine was used, at first hypodermically, in doses of one-thirtieth, one-twentieth, one-eighteenth, and one-twelfth of a grain on four consecutive days, with the very gratifying result of enabling the patient to detect at once the gas when lighted. As the patient had to leave the city, strychnia by the mouth was ordered in doses gradually increasing to one-tenth of a grain four times a day. At the end of two months sight had so far returned that she could attend to household duties, but could not yet sew or read. The strychnia was now suspended for two months, when she came to the city for examination. She could then make out No. 18 of Jaeger's test-types at one foot. She remained three days under observation with daily hypodermic administration of strychnia, each day's injection giving evidence of stimulation, so that on the third day she could read No. 14 of the test-types, not a letter of which could she make out two days before. Notwithstanding this great improvement in sight, the optic nerve under the ophthalmoscope had undergone but little change. The woolly look had disappeared, but in each eye the discs were white with irregular outline and with small shrunken vessels. The right disc, in which there was no perception of vision, was the counterpart in appearance of the left optic nerve with which she had such good vision.

In these two selected cases, one typical of tobacco amaurosis and the other of white atrophy following neuritis, strychnia was used with decidedly good results, given as it was in large doses and for a long period. After a very large experience, covering a period of eighteen months, Dr. Chisolm has found that strychnia is a remedy upon which much reliance can be placed in cases of defective nerve action, provided it be given in doses as large as the system will tolerate, which is in very much larger doses than are usually administered. It is always prudent to commence with the small dose of one-thirteenth of a grain three times a day after meals, but not to continue with these doses. Should they produce muscular contractions at first, after a few days these physiological effects will not show themselves, and a larger dose will be tolerated. In the majority of cases no good results will be secured until the patient takes the largest dose which the system will comfortably bear. The dose must be always large enough to produce sensible stimulation of the nerve centres. When the dose ceases to excite muscular stiffening it must be increased. A case in point is that of a patient suffering from progressive white atrophy, who, under the large dose of one-fifth of a grain of the sulphate of strychnia, had so improved that from No. 16 Jaeger test-types he could read "minion," or No. 4 of the test-types. Here improvement stopped, notwithstanding the full dose of one-fifth of a grain was continued. One-thirtieth of a grain was added to this, when an improvement was at once recognised. In the administration of strychnia an increase in the dose from one-thirtieth of a grain to the one-sixth or one-fifth of a grain can be readily made in from fifteen to twenty days, and these large doses then continued for months, or as long as benefit accrues. Whatever advantages are derived during the administration will be permanent, as Professor Chisolm has so far met with no relapses when the medicine was discontinued. Experience shows that strychnia is very rapidly absorbed into the circulation, and is eliminated slowly. The strongest physiological effects are observed within an hour and a half of the administration, which may be interpreted full absorption. Hours afterwards some of this speedily absorbed dose will still remain in the system, as evidenced by the cumulative effects of the remedy when given too frequently. The breakfast dose of one-fifth of a grain may not be felt, and the dinner dose cause only slight muscular bracing, but the supper dose when added to what remains in the circulation from the previous doses will produce very uncomfortable, and at times alarming, rigidity. It has, therefore, been found expedient to use half doses after supper to avoid this discomfort. After the most careful experiments, using the identical mixture at various times with the same patients, no advantage in the hypodermic over the mouth administration could be detected. The injection has, therefore, been abandoned as needlessly painful. The remedy can only act upon the nerve centres through the circulation, and its action under the skin is only a little more prompt, not more effectual nor permanent.

HÔPITAL NECKER, PARIS.

(Under the care of Dr. Potain.)

In the course of a visit to the wards of Dr. Potain we noticed several cases of interest, two of which are especially worthy of being noticed. We are indebted to M. Raoul Hervé, Dr. Potain's house-surgeon, for kindly supplying additional information.

TWO TABLESPOONFULS OF LITHARGE SWALLOWED WITHOUT SYMPTOMS OF LEAD-POISONING.

The patient was a woman of about thirty, to whom eight days previously two tablespoonfuls of litharge had been administered by a woman friend, with the object of bringing back the menses, which had been stopped the day before through washing in cold water. A tablespoonful was taken daily through two successive days. The patient has experienced no pain in the bowels; no constipation or diarrhœa; the bowels have acted as usual, and normally. Her appetite is good, and digestion is quite easy; she has, however, felt intense pain in the teeth, head, back, and legs; and presents a yellowish tint of the skin. Ordered, seidlitz water, a sulphurous bath, four ounces of chinchona wine, and fifteen grains of sulphur daily. The urine will be examined for lead. Dr. Potain observed that he has known of litharge being administered by matrons as an abortifacient.

CASE OF TYPHOID PNEUMONIA MISTAKEN FOR TYPHOID FEVER.

This case was of much interest from a diagnostic point of view. It had been taken for one of typhoid fever, and Dr. Potain, after careful investigation, set down the diagnosis as pneumonia of a typhoid form. The woman (aged thirty-four) had taken to bed seven days previously. She had been

unwell before then, suffering especially from malaise, slight shiverings, want of appetite, &c.; but on the day she actually fell ill she had a severe attack of rigor, which lasted about an hour. She passes water easily. The pulse was 92 last night, and is 108 this morning. The surface is hot and dry. The tongue is "sticky," and it and the teeth are covered with fuliginous matter. The abdomen is tense, painful, and stiff. She has had only two stools since yesterday. She wears a general aspect of stupor. No *gargouillement*. No spots on the skin of the abdomen. She has not had epistaxis. The pulse is not dicrotic.

On auscultation, the heart's sounds are found to be weak, but there are no signs of ulcerating endocarditis. There exists a souffle sound all along the upper half of the left lung, with no rhonchi, but râles. There is dulness of sound on percussion.

Taking together the above signs and symptoms, with no epistaxis, no dicrotic pulse, no *gargouillement*, no diarrhœa, no spots on the abdomen, &c., the existence of the pulmonary lesions, the violent rigor which ushered in the disease, and notwithstanding the aspect of stupor, the tender condition of the belly, fuliginous matter on the tongue and teeth, &c., Dr. Potain lays down the following diagnosis:—Pneumonia of a typhoid form in its eighth day of existence, in a woman who had been unwell for some time previously.

She was ordered a pectoral ptisan with two ounces of rum; a large blister to the back (left side); bouillons.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 13TH, 1873.

DR. C. J. B. WILLIAMS, F.R.S., PRESIDENT, IN THE CHAIR.

ON THE INFECTIVE PRODUCT OF INFLAMMATION.

BY J. BURDON SANDERSON, M.D., F.R.S.

THE paper contains the results of researches made, for the most part during the early part of 1872, for the purpose of elucidating the pathology of secondary inflammations. It is divided into three parts.

In the first part the nature of the process of inflammation is treated of, with special reference to the question how a primary inflammation gives rise, on the one hand, to general constitutional disturbance, and, on the other, to the establishment of new foci of inflammation in parts remote from the original seat of irritation or injury. To distinguish those inflammations which exhibit the tendency to produce the effects in question the author uses the word "infective," understanding it to express two sets of characteristics—one relating to what occurs at the original seat of inflammation, the other to the induced effects which manifest themselves elsewhere. Of the two groups of phenomena, it is obvious that those which are remote from the seat of primary action claim most attention in relation to the present inquiry. They consist partly in the springing up of new foci of irritation or inflammation along the course of the infected channels, partly in the occurrence of changes in the blood itself (not yet investigated) of such a nature as to show that it is impregnated with an infective poison. In investigations made by the author in 1867–68, one branch of the question of phlegmonous infection was worked out with some completeness. It was then found that when, in the lower animals, particularly in guinea-pigs, local inflammations are produced either in the skin or the peritoneum by the introduction of irritant substances, two distinct sets of consequences manifest themselves—namely: on the one hand, the production of a chronic disease, affecting all the internal organs, having the characters of a chronic interstitial inflammation (i.e., irritative germination of the interstitial tissues of the lung, liver, spleen, &c.), resulting in slow caseous or fibrous degeneration, and destroying life by a gradual process of wasting; on the other, an acute process in which the same organs and tissues are affected much more rapidly, and in which we have to do with two additional elements—namely, fever, and the formation of abscesses in the irritated tissues. To both of these processes the author applies the word "infective," as in certain cases both appear to spring from an infection derived from the same source—i.e., from the same primary inflammation,—and progress in the same animal at the same time.

The second and third parts of the paper are entirely occupied with a summary of the experimental results. After a short account of the work of previous years, the author proceeds to give a detailed description of the more recent experiments on which his conclusions, so far as relates to acute secondary inflammation, are founded. These are divided into two series. In those comprised in the first series, the liquids of acute inflammations of great intensity were used, and the induced disease exhibited those characters which are expressed by the word septicæmia. The results of these experiments, 27 in number (which were shown to the Society in a table), may be summed up as follows:—Of the 27 experiments, serous liquids were employed in 18; liquids of subcutaneous suppurations in 4; liquids from softened and infective nodules and lymphatic glands in 3; and in 2 others the contents of an inflamed uterus. The table also exhibited another experiment in which blood of an infected animal was used. All these liquids were employed immediately after their removal from the living body of the diseased animal, and contained at the time bacteria. The animals observed were guinea-pigs, dogs, or cats. In 4 cases the liquid was injected into the jugular vein; in the rest into the peritoneum. The quantities used varied from three minims to twenty-four minims. Although the liquids were similar, all being products of rapidly-progressing infective inflammations, the induced results were not all of equal intensity. In 20 out of the 27 experiments tabulated, death took place within twenty-four hours. Of these, all excepting 3 received the excitant in the peritoneum. Peritonitis existed in every case, and it was observed that it was no less intense in those cases in which the liquid was injected into the jugular vein than in the others. It was also observed that after injection into the peritoneum the pleura and pericardium were often found to be as intensely inflamed as the peritoneum itself. In all but very rapid cases the peritoneal exudation exhibited the same character. It was viscid and coagulated imperfectly. It contained pus-corpuscles in small numbers, and the liquor puris often exhibited, when subjected to examination with high powers, a tremulous movement of the liquid, which was found to be due to the presence of extremely minute rods. In almost all the experiments tabulated the blood exhibited microscopical appearances which were striking and unequivocal. The liquor sanguinis contained rod-like particles, and possessed in some instances a peculiar viscidity, the nature of which must form the subject of future investigation. In the larger animals death is preceded by phenomena which resemble those of putrid infection. This is shown in the paper by a careful comparison of the symptoms with those described by Bergmann as resulting from the injection of putrid liquids into the veins. It is, however, to be observed that the quantity of a putrid liquid required for the production of the same effect is incomparably larger than that employed in the present experiments.

In the course of the experiments of this series it was repeatedly observed that inflammations of a highly infective character, yielding exudation products rich in septic microzymes, may be induced by the introduction of chemical irritants either into the subcutaneous tissue or into one of the great serous cavities, even when liquids used are themselves destructive to the life of these minute organisms, or have been subjected to prolonged ebullition immediately before, and when all other precautions are adopted to guard against the possibility of septic contamination from without.

In the experiments of the second series, the infecting liquids used were not products of what might be called virulent inflammation, but of more slowly progressing inflammatory processes, chiefly characterised by softening or unhealthy suppuration, either of nodules or previously consolidated or infiltrated tissues. In the examples given, the material was derived in each instance from the diseased lungs of human beings or animals affected with chronic pulmonary tuberculosis in the stage of softening. The lesions were substantially the same in all: the serous cavities were inflamed, and contained variable quantities of exudation liquid charged with bacteria, and in most cases there were extensive adhesions and false membranes;

and in all, the viscera contained "infection-nodules," which were hard and firm externally, with purulent centres.

In the concluding paragraphs of the paper the author cautiously expresses the inferences which he thinks are justified by the experimental results. He thinks that it has been shown that the condition which is expressed by the word septicæmia (including under the term, not only septic fever, but also the intense mucous and serous inflammations by which it is accompanied,) may be produced independently of the entrance of septic matter from without by the introduction into the serous cavities or into the circulation of liquids derived directly from living tissues in certain stages of inflammation, and that the process by which infective abscesses are formed in various organs and tissues at a distance from some primary focus of inflammation of similar origin, both being due to the existence in the circulating blood of an infective agent which, although of purely intrinsic origin, yet possesses all the characters of a septic poison.

The question of the origin of the infective agent itself Dr. Sanderson regards as entirely distinct from that of the intrinsic or extrinsic origin of the minute organisms by which its presence is declared, for, to quote the concluding sentence of the paper, "it does not at all follow because these organisms come in from outside that they bring contagium along with them. It may be readily admitted that they may serve as carriers of infection from diseased to healthy parts, or from diseased to healthy individuals, and yet be utterly devoid of any power of themselves originating the contagium they convey."

Dr. DICKINSON thought that the conclusions of the paper as to the conveyance of the infective matter from the primary infective focus by the lymphatics were opposed to the known facts of pathological anatomy relating to the distribution of pyæmic abscesses. It could not be denied that such abscesses were always found in human pathological anatomy to follow the course of arteries, and accordingly it was generally admitted that such abscesses are formed by an embolic process, and were dependent upon the obstruction of arteries by infective plugs. He would be glad to know whether he had rightly understood the conclusion of the paper on this subject.

Dr. SANSOM objected to the author's inference, from the facts observed as to the agency of bacteria in the process of infection, that these organisms are to be regarded as mere carriers. In relation to this question we have two sets of facts which appear at first sight contradictory. On the one hand it appears that septic bacteria, when cultivated in other than animal liquids, are comparatively inactive as poisons; on the other, there is good reason for believing not only that they contain in themselves the active part of infecting animal liquids, but that the liquid itself, when deprived of them, is inactive. This could, he thought, be only explained by supposing them to be agents of which the activity depends on the soil in which they grow. Dr. Sansom next drew attention to the facts relating to the production of septic inflammation of serous membranes by the injection into the pleura or peritoneum of chemical irritants absolutely free from bacteria or their germs. Analogous instances of what he might call auto-infection were referred to in the recent discussion at the Pathological Society—cases in which it appeared that putrid change occurred in inflammatory softening, even when resulting cavities were absolutely excluded from the access of air. This quick peopling of inflammation-liquids with bacteria, however to be explained, did not render it at all necessary to suppose that they were developed spontaneously.

Mr. SAVORY said that, speaking with great diffidence, he failed to see the chief points of novelty which the paper suggested, or how it advanced our knowledge of this subject. The paper did not assume that the products of infective inflammation were the causes of pyæmia and septicæmia, but fluid introduced might produce changes similar to those produced by the injection of septic fluids. As a clinical fact, cases of septicæmia were preceded by inflammation, but that was not the sole cause of septicæmia and pyæmia, but the clinical accident. As to the minute fragments of organic matter, bacteria, &c., whatever might be their form or relation, and which Dr. Sanderson believed the cause, was it established that this was so? might they not be only associates? Dr. Sanderson had confirmed the observation of those who differed from Virchow that the whole of the blood was affected, and hence the septicæmia.

Dr. PAYNE said he would like to ask Dr. Sanderson if he had found any criterion by which, specifically, active bacteria could be distinguished from the common form accompanying putrefaction. He thought it worth while to consider if there was any marked distinction between the bacteria disease and those of putrefaction. He would like also to ask if, in the series of secondary inflammations there had been found any transitional forms between the disease as necrotic or inflammatory, or between caseation and suppuration. He asked the question because he had been surprised at post-mortem examinations to find, in the best-marked cases of pyæmia, abscesses containing hardly anything that was described as pus. It might have easily decomposed and become granular; if not so, he thought that if examined carefully in the greater part of the broken-down matter from a fresh abscess, pus or not, according to the name given to it, the cell-forms were few and the granular matter large.

Mr. HULKE said he was sorry he was not present at the commencement of the reading of the paper, but he understood that the secondary lesions were confined to the viscera and the glands. He would like to ask if the experiments had thrown any light upon the causes which lead to the so frequent production of secondary abscesses of the joints in pyæmia. Though he had thought much on the subject, he could not account for this remarkable pathological fact.

Dr. SANDERSON, in reply, said that he would first advert to the general objections made by Mr. Savory—objections which had often presented themselves to his own mind, and of which he felt the great weight. He had, however, not brought forward the paper with the intention of settling the whole question of inflammation, including pyæmia, tuberculosis, septicæmia, &c., at once; but only as part of a series of similar studies which he hoped to continue. He therefore trusted that the paper would be judged merely in relation to the limited questions actually raised in it, and the bearing of the experimental facts on those questions. In answer to the observations of the first two speakers, he would confine himself to saying something as to the nature of the septic form of traumatic fever, and, in particular, as to its reaction on the local inflammatory process. The ground on which he called the fever in question septic he had endeavoured to make clear in a communication made to the Pathological Society a year before. The purpose of the experiment then described was to show that, although the fever which accompanies the formation of secondary abscesses is essentially septic, it is produced independently of the introduction of septic matter from without. He wished now to draw attention to the influence exercised by this form of fever on any chronic inflammatory process going on at the time. Observation had shown that, if in an animal affected with chronic interstitial indurations septic fever is induced, the diseased parts become the seats of more acute changes resulting in the formation of infective abscesses, and he held that this was one way in which secondary abscesses might be formed independently of embolism. As regards the other objection, that the bacteria are mere carriers and not agents of infection, he thought Dr. Sansom gave a sufficient answer when he said that probably this depended upon the circumstances under which they were placed: if the liquids were not poisonous, neither were the bacteria. He (Dr. Sanderson) thought no other answer could be given. With regard to Dr. Payne's suggestion as to the correspondence in the post-mortem and the lesion associated with it, he had nothing more to say beyond what he had said in the paper. As to another point suggested—whether the infecting liquid gained or lost in activity after death,—it had been found that its activity was always greatest after death, and diminished as putrescence went on. With regard to Mr. Hulke's question, why were the cavities of joints affected in pyæmia? all that could be said was that, in many of the lower animals, the serous membranes have a tendency analogous to the inflammation of the joints in man. In conclusion, Dr. Sanderson stated that his colleague, Dr. E. Klein, had co-operated with him in the preparation of his paper, and had taken a principal part in the investigation.

On the invitation of the President, Dr. E. KLEIN made a few remarks as to the question of the embolic origin of

pyæmic abscesses, pointing out that nothing had been advanced in the paper to invalidate the views entertained by Dr. Dickinson and by pathologists on this subject.

MEDICAL SOCIETY OF LONDON.

MONDAY, APRIL 28TH, 1873.

DR. S. O. HABERSHON, PRESIDENT, IN THE CHAIR.

MR. J. S. STREETER mentioned a case of twins having only one chorion, one child being double the weight of the other. Both were born alive. The smaller one drew in air and fully inflated the chest, but the larger and more powerful child did not breathe at all. He also showed drawings of still-born infants where the heads were enlarged and the necks much elongated, and other pictures showing the umbilical cord twisted around the neck in various ways.

Mr. SPENCER WATSON showed a patient, aged fifty, in whose vitreous humour an ophthalmoscopic examination discovered a long dark filament of lymph floating freely about.

Dr. SANSOM communicated the following

CASE OF CONGENITAL HYDROCEPHALUS.

Kate T——, aged eleven weeks, came under his care as out-patient at the North-Eastern Hospital for Children on the 9th April last. The father died of phthisis. The child was well developed, but never took any notice, and the head was persistently retrojected. The fontanelles were distended and fluctuant, and progressively the parietal bones became separated. There was no vision. Progressive languor occurred; and the child died on April 20th. The post-mortem showed all the organs healthy except the encephalon. The brain was pale, and puncture at the base caused a gush of serous fluid with flocculi to the extent of half a pint. The cerebellum was distended with this fluid, as well as the lateral ventricles, the brain-substance forming a thin investment of the fluid.

Dr. CROMBIE showed a Heart, the pericardiac system of which was covered with fibrinous flocculent deposits of lymph much resembling granulations, apparently the result of repeated attacks of pericarditis. It was taken from a woman aged forty-five, who had never suffered from rheumatism, and in whom pericardial friction-sounds were not detected. The pericardial cavity was distended with fluid at the time of death.

Dr. WILTSHIRE suggested the use of the aspirator in cases like this for the removal of the fluid, the pericardium having been punctured several times with marked benefit.

Dr. SANSOM said, should he have occasion to tap a hydrocephalic head, he should certainly employ this instrument, which Dr. Broadbent had employed on several occasions with benefit.

Mr. JOHN HAINWORTH said that the idea of tapping the pericardium was not new, for as early as 1826 he knew a case in which this operation had been performed by an English surgeon.

Mr. SPENCER WATSON read a short paper on

SUBJECTIVE SYMPTOMS OF EYE DISEASE.

He showed how some forms of muscæ were merely physiological, and seen only under certain peculiar circumstances. Spectral images were sometimes caused by floating films on the vitreous, and when the patient so affected was fanciful or superstitious, definite forms were described as appearing before him, though, as a rule, no uneasiness of this kind was occasioned beyond the anxiety incidental to the prospect of rapid failure of sight. Coloured spectra and double images were described and various theories for their appearance given, and the formation of multiple images in a single eye was demonstrated by means of lenses. Various instances of remarkable subjective symptoms of disease were related, and a case of cataract in a myopic patient in whom the physical signs indicated a mature cataract, while the vision remained perfectly good for near objects. This was not unfrequent with myopia, and the author remarked that the subjective symptoms in such cases were very important as a means of connecting the conclusions drawn from ophthalmoscopic investigations.

Dr. E. SYMES THOMPSON then brought forward—

TWO CASES OF PERITYPHLITIS IN WHICH RECOVERY TOOK PLACE.

The first was seen in consultation with Mr. H. Hemsted, of Whitechurch, who furnished the following notes:—T. H——, aged twenty, a farmer, had an attack of colic, followed on the third day by severe pain and tenderness; gradually lessened under leeches, calomel, and opium. At the end of a fortnight pain in the back was complained of, and some fulness was detected in the right loin; the symptoms becoming urgent, pulse and temperature high, with frequent vomiting, a grooved needle was introduced to the depth of two inches midway between the last rib and crest of the ilium; a dark fetid matter escaped; a trocar and canula were then used, and half a pint of horribly offensive matter escaped. The wound was plugged with oiled lint twice a day. The lint was removed, and for several weeks a pint and a half of matter was discharged daily. Several fragments of vegetable marrow, and on two occasions grape-stones, were discharged (shown), showing that an undoubted communication existed with the bowels. No pus passed per anum. Eventually the discharge ceased, and the wound healed after having been open for nine weeks. The second case was seen in consultation with Mr. Marshall, of Mitcham, who is also a Fellow of the Society. W. J——, aged forty-two, was attacked when in bed with violent griping pain in the abdomen, with vomiting, tenderness increased on pressure, especially in the right iliac fossa, where the percussion note was dull, the abdomen being elsewhere tympanitic. There was a decided fulness and hardness, giving the impression of an elongated tumour the size of a hen's egg. The patient had eaten nothing to account for the attack, but about a week before, while eating a piece of bread, some sharp substance, which may have been a pin, scraped his pharynx, leaving a sense of soreness for several days. Calomel and opium were prescribed, and linseed poultices applied. The pain in the region of the cæcum continued very severe; opiates and leeches were employed. There was great prostration of strength, with rapid pulse. At the end of a week the abdominal tenderness abated, and the patient gradually rallied, although for many weeks the lump in the iliac region threatened to suppurate; this eventually dispersed, and the patient is now well. A perceptible hardness, however, remains in the region of the cæcum. Dr. Thompson said that it was not easy to distinguish between colic, intussusception or other obstruction, peritonitis, and inflammation in or around the cæcum; but the diagnosis must be made before commencing treatment, for unrelieved fæcal accumulation was a cause of inflammation, and so were violent purgatives. In the first case the colic, impaction, and inflammation about the cæcum led to the escape of the contents of the bowel into the subperitoneal tissues, with consequent formation of matter in the most dependent part. In the second case it seemed impossible to decide whether the peritonitis with subperitoneal thickening threatening abscess was due to the escape of any foreign body from the bowel. The history of the case favoured this view, but the subsidence of the swelling without discharge of matter appeared to negative it.

Drs. Habershon, Carr, and Routh, and Mr. de Méric spoke in the discussion which followed, and the meeting adjourned.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, MAY 15TH, 1873.

DR. BROADBENT IN THE CHAIR.

DR. THOMAS BALLARD, President, read a paper on

WHAT ARE THE SIGNS OF CONGENITAL SYPHILIS?

The author craved the indulgence of the Society for submitting to them a familiar subject from a new point of view. He had been taunted at this Society and elsewhere for professing never to have seen a case of congenital syphilis, and, in vindication of the position he had assumed with regard to this subject, he had accepted a sort of challenge to submit his reasons for holding such heterodox views to the criticism of his fellow members. The idea that syphilis might be transmitted to the offspring was of ancient date, but to identify a special set of symptoms as proof of such an accident having occurred was principally

the work of the present century. No allusion was made to the works of Mr. Hutchinson, as the present observations were limited to the inquiry, "What are the signs of congenital syphilis in infancy?"

Dr. Ballard claimed the privilege of drawing his own inferences from his own observations. He had practised his profession for thirty years, and had been accustomed to keep a record of his patients' ailments; so he possessed a medical history of a large number of persons. Many had been born, grown, and remained under his observation. Many had had syphilis, and it was in them he had watched its effects, and had failed to trace any evidence of its transmission to offspring. The transmission of syphilitic poison to the child by an infected parent is said to be manifested either before birth, at birth, or some time after birth. Dr. Ballard endeavoured to show that the conditions at these periods, which are supposed to depend upon the taint of syphilis, can be explained by simpler and more obvious means.

It is well established that a woman who has been infected by syphilis is apt to abort, and to bring forth dead children. The generally accepted view is that the fœtus dies in utero from the direct effect of the virus upon its organism. Trousseau supports this, and says "he is unacquainted with any lesion of the placenta attributable to syphilis." Exception was taken to this because it is known how seriously the economy of the mother suffers by the disease, how deeply seated and how persistent are its deleterious effects, so that it seems only reasonable that a function such as reproduction is prejudiced by it. If the cause of death resided in the germ, it surely would not grow. The defective state of the soil seems sufficient to account for the blight of the young creature, which is so dependent on it for nourishment.

Assuming the fœtus to be contaminated, observers have looked for evidence on the bodies of still-born children, and have thus interpreted the decomposition of the cuticle which is often seen. But the fœtus dying a considerable time before it is expelled, maceration of the body in the liquor amnii explains this. Similar abortions and premature deliveries occur in those suffering with other forms of cachexia, especially chronic Bright's disease, and the same appearances have been observed in these cases as in those known to have been syphilitic. In either case, when a living child is born it appears to have a fair chance of living, and of making up in its growth all that it may have lost by its parent's defect.

Several cases were here read illustrative of the above argument, hence the first conclusion:—That the death of the fœtus in utero is the consequence of some defect in the maternal system, resulting from its contamination by the syphilitic virus, and that it is not necessary to infer, neither is there evidence to prove, that the organism of the child is intrinsically affected by it. The partial decomposition of the cuticle observed on the bodies of still-born children is satisfactorily accounted for by their maceration probably for some weeks after death in the liquor amnii.

If the death of the fœtus in utero is due to the direct effect of the syphilitic virus upon its organism, and it is true that congenital syphilis is exceedingly prevalent and leads to a large number of deaths annually, why is not the disease more commonly evident at the time of birth? That syphilis is not often then observed is admitted by all who have written on the subject. M. Huguier observed but one at Lourcine; M. Cullerier has never seen one at the same institution; MM. Trousseau and Laségue have never seen congenital syphilis at the time of birth; Dr. West has never seen an infant at birth present evidence of the venereal taint; and the experience of Dr. Ballard coincided with this. On the other hand, Sir A. Cooper mentions a case, but this seems open to objection. Hence the second conclusion:—That the records of cases of living children having been born with manifestations of syphilitic disease are so few as to allow of the supposition that they are not trustworthy.

Pemphigus is a form of disease which sometimes occurs to infants within a fortnight of birth, and has been regarded as a manifestation of congenital syphilis. Dr. Tilbury Fox says, "Pemphigus is of the same nature as erysipelas." This is no doubt the true explanation of it, and it occurs in the following manner:—The infant becomes weak before the umbilicus has healed; an unhealthy suppuration is established; from this absorption takes place, and erysipelatous symptoms of great variety and intensity arise. (A case quoted to illustrate this.) It is probable that many cases of the supposed appearance of congenital syphilis at or soon after birth are of this nature, and that the interval between the birth and the appearance of the symptoms has been overlooked or forgotten. The erysipelatous affections are of course very severe and generally fatal, hence it may be that Trousseau said "that congenital syphilis is nearly always mortal if it show itself within the first fortnight after birth." Hence the third conclusion:—That pemphigus and other forms of erysipelatous disease which may occur within a fortnight after birth, and have been regarded as syphilitic accidents, are pyæmic affections resulting from an unhealthy suppuration of the umbilicus which is produced by the child being subjected to certain unfavourable conditions.

The main task is to invite attention to a more simple explanation of those appearances which are generally recognised as indicating congenital syphilis, and which are developed from three weeks to three months after birth. These are inflammations of the mucous membranes and skin; but if these symptoms are due to a virus in the child, why should their appearance be delayed until the parts affected have been exposed to external conditions powerfully able to produce them? Take coryza, about which so much is said by French authors. Why should ophthalmia, liable to occur in the newly-born, delay its appearance until after the fifth or seventh day if it depended either upon an intrinsic disease or even upon the contact of an irritating fluid during the act of birth? How much more reasonable to attribute it to some external cause operating upon the delicate eyes. A newly-born infant kept exposed to the light will certainly have ophthalmia; darken the room and it will recover; or kept in the shade it will escape ophthalmia. The Schneiderian membrane of a young infant is likely to be more susceptible of atmospheric influences than that of an adult; it is not, then, surprising that it should become the subject of a catarrh. Why, then, should snuffles be regarded as evidence of a loathsome disease? (A bad case of snuffles quoted, which lately occurred to an infant one month old in a family where it was known that there was no syphilis.) Otorrhœa occurs, and is sometimes obstinate, but can always be cured by local means.

The mouth may become the seat of disorder, and much is made of this in favour of a theory of syphilis. A young infant must feed by suction, and, being entirely dependent upon its nurse for the source of nourishment, is it surprising if it should make its mouth sore by efforts to satisfy its cravings when difficulties are opposed? The French are accustomed to farm out their children, and it is usual for a nurse to undertake to suckle two or more children. It is no wonder, then, that these children's mouths, and the nurse's nipples, become sore. This is the true nature of thrush and other kindred inflammations of the mucous membrane of the mouth. A hard india-rubber teat, or any badly-arranged medium for sucking, will cause an infant's mouth to be sore; and attention paid to the cause will at once suggest the remedy. Why, then, should a sore mouth or some soreness of the lips be attributed to a constitutional disease when there is such a cause operating to produce the malady? The manifestation most relied upon as diagnostic of congenital syphilis is some form of cutaneous eruption. M. Caillant says: "The cutaneous phenomena constitute the whole disease in infants; the mucous patch is the true pathognomonic symptom of congenital syphilis of which it constitutes the whole external manifestation." Other writers are more comprehensive in their views of the skin eruptions, and include every form which an inflamed skin can assume, from a simple erythema to a decided ulceration and a growth from the base of it. There is no difference of opinion as to the situation of these characteristic cutaneous inflammations; all concur in fixing them about the buttocks and thighs ("les fesses et les cuisses"), which necessarily include the genitals and anus; and this fact seems, by a strange perversion of reasoning, to weigh heavily in the argument in favour of the malady being venereal.

Inflammation of the skin caused by the contact of moist woollen materials must be observed by all; and the eruptions about thighs and buttocks of infants depend on this cause. Keeping on a napkin, and wrapping the thighs and

legs of the child in flannel to absorb the urine, is sufficient to account for all the cutaneous phenomena observed in these regions. The evidence of the truth of this is to treat such cases by directing the napkin and all flannel to be left off, and any eruption or ulceration to be covered with an ointment made with equal parts of lead and zinc ointment. With this treatment recovery is rapid, and there is no necessity for a long course of mercury with chalk. Cases were detailed and others shown to illustrate this. One woman had remarked that "after her child had taken mercury with chalk for many weeks without benefit, it quickly got well after being short-coated." The use of macintosh sheeting as an outside napkin, or to protect the child's bed, is a cause of cutaneous eruptions, which are sometimes thought to be syphilitic. One case shown was of ulceration by the side of the anus, which had been twelve months under treatment as syphilis, but got quite well in a few weeks by use of the ointment and removal of the napkin.

The appearance of miniature decrepitude which is thought to be so very characteristic of congenital syphilis may easily be accounted for by the unfavourable conditions under which such a child has doubtless been placed. It has certainly been a sufferer with diarrhœa, and probably from deficient food. No such case has ever been encountered by Dr. Ballard where the child has had plenty of food, and been kept to two alvine discharges in the course of the day. Syphilis is not more frequent among the poorer than the better classes of society; yet the cases of supposed congenital syphilis are principally observed among the poor and dirty people, who take their children to hospitals. Dr. Ballard begged those of his audience who saw these poor people at hospitals to think of the subject from his point of view, and thus try to spare the infants from the effects of long courses of mercury, and the mothers the labour and loss of time from taking their infants to and fro for long periods. Hence the last conclusions:—That the symptoms which are developed some weeks after birth, and are relied upon as pathognomonic of syphilitic contamination of the system of the child, are mere accidents, arising *also* from certain unfavourable conditions to which the child is exposed, and that they are all preventable or easily cured when the cause producing them is recognised: and, consequently, That the practice of administering mercury with chalk to infants for long periods of weeks or months is not necessary, and is prejudicial to their healthy growth.

Three living specimens were introduced by Dr. Ballard to illustrate his paper.

Mr. MILTON considered the symptoms of congenital syphilis quite unmistakable, and not to be accounted for by any other cause; and would ask Dr. Ballard to explain the occasional transmission of syphilis from sucklings to their nurses.

Mr. DE MÉRIC strongly believed in the value of mercury both to the children themselves and to eradicate the virus from their parents. He thought Dr. Ballard was bound to furnish some information as to the real cause of that group of symptoms usually described as due to congenital syphilis, and would like to know the treatment he pursued for such. Mr. de Méric said the theory that unhealthy intra-uterine and constitutional influences are responsible for the symptoms, is quite disposed of by the fact that an unaffected mother may give birth to a syphilitic child.

Mr. HENRY LEE did not think Dr. Ballard's first two cases syphilitic. He preferred the old plan of inunction to the administration of grey powder, which he thought was often injurious to children; and mentioned a case in which a long course of abortions was checked by use of the calomel vapour bath.

Mr. GANT said syphilis was undoubtedly a blood disease, and that the most valuable evidence is the concurrence of special symptoms.

Mr. CRIPPS LAWRENCE inquired if Dr. Ballard had examined after death any of the class of cases alluded to, and if so, whether he had observed any alteration in the spleen or thymus gland.

Mr. OWEN made some remarks controverting the views expressed in the paper.

In reply, Dr. BALLARD stated that he had made no post-mortem examinations—that he had no objection to mercury, but was convinced that all those appearances usually noted by authors as dependent on congenital syphilis were simply due to erysipelatous or other forms of inflammation springing from neglect of sanitary conditions.

Mr. OWEN showed a boy with Paralysis of the Serratus Magnus on both sides, causing the scapulæ to project in an extraordinary and characteristic manner.

Mr. MILTON showed a specimen of syphilitic fungus testis.

Mr. CRIPPS LAWRENCE exhibited some colourless tincture of iodine.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 9TH, 1873.

MR. PRESCOTT HEWETT, PRESIDENT, IN THE CHAIR.

DR. TILBURY FOX brought forward, for Dr. GUSTAVUS FRITSCHE, of Czenstochowa, the particulars of two unusual cases of

DERMATOLYSIS, OR PACHYDERMATOCELE,

with photographic illustrations. Case 1 was that of a beggar, in the Island of Madeira, the whole right side of whose face resembled an empty bag, which, on handling, was found to be not a growth which weighed down the skin, but consisted of a remarkable hypertrophy of the skin and cellular tissue. The length of the bag-like process was two inches and a half. The external appearance of the mass was that of healthy skin. The right nostril was thick and elongated. The opening of the right eye was on the same level as the opening of the nose. On lifting up a thick and lengthened eyelid, the eyeball was seen to be atrophied and changed, so as not to be easily recognised, and it hung from the optic nerve, proportionately lengthened and thinned, like an apple hanging on its pedicle. The sight was lost. The left eye was normal. The corner of the mouth, on the right side, was very much drawn down. The act of eating was executed with difficulty. The speech was unintelligible. The right half of the tongue was greatly enlarged in all its parts. The helix of the right ear was hypertrophied, but the skull-bones were normal. The disease appeared in young life, and was idiopathic in character. Case 2 was that of a girl, aged twenty-five. The disease appeared in her when she was eight years old; it began with two very small outgrowths, one on the face, and the other on the clavicle, like fibroma molluscum. When Dr. Fritsche saw the case, from the right edge of the under jaw there hung lax ten or eleven flabby folds of skin, like empty bags, each being distinct, with its own base and apex. The tumour in the chest consisted of a fold of the skin, eight inches broad at the base, four inches at the apex, and ten inches and a half in length. The external aspect was that of healthy skin, but it felt thicker than normal. There were other smaller growths, the size of hazel-nuts, about the body. Dr. Fritsche removed the large tumour with complete success, but then lost sight of the case. Dr. Tilbury Fox made some comments upon the pathological relations of such cases as these.

Mr. BARWELL referred to Mr. Pollock's case, read at a meeting of the Royal Medical and Chirurgical Society, and pointed out a symptom recorded which was not mentioned by Dr. Fritsche—viz., an offensive odour from the glands.

Dr. DUFFIN thought that the cases were probably congenital nævi, and quoted the case of a girl with a similar affection, in which the clue to the nature of the disease was afforded by the presence of a nævus on the leg. In this case a nævoid mass existed over the right temple, and another tumour, apparently an aborted nævus, was found over the pectoral muscle.

Dr. TILBURY FOX thought these cases different from those of Mr. Pollock, and remarked that fibroma originated about the sebaceous glands presenting microscopical nests of cells, whereas dermatolysis was usually localised, not exhibiting the cellular characters of fibroma.

Mr. W. SPENCER WATSON read the report of a case of

INTRA-ORBITAR NÆVUS TREATED BY LIGATURE AND ACTUAL CAUTERY,

in a child who, at the commencement of the treatment, was eight months old. The eyeball was thrust aside by the growth, but not protruded. It was evidently increasing, and two attempts to strangulate its nutrient vessels by

means of subcutaneous ligatures were ineffectual, it being impossible to reach the apex of the orbit with any needles, however curved. Mr. Watson then employed the galvanic cautery, but the platinum wire used could not be made long enough, and he subsequently used a cautery-iron made specially for the purpose, with a protruded piece an inch and a quarter in length. This was thrust into the orbitar cellular tissue both from the skin-surface and through the conjunctival aspect of the lid. Considerable shrinking of the bulk of the nævus had taken place, and it appeared likely that it would diminish still more as the cicatrix contracts. The fact of the tumour increasing and threatening to cause further displacement of the eyeball seemed to justify the operations resorted to, though it was pointed out that other operations, such as extirpation of the nævus by a cutting operation, or the injection of its substance by the perchloride of iron, were not free from danger, and that any proceeding less formidable than the actual cautery would have been inadequate to effect the result aimed at.

Mr. GEORGE LAWSON thought the principle of non-interference was best in such cases, unless hæmorrhage supervened suddenly and severely, and that then the arrest of hæmorrhage by pressure was the proper treatment.

Mr. HAWARD suggested probes of nitrate of silver, as in nævus of the lip.

The PRESIDENT said that a large number of them might be safely left alone, as they often died out, and referred to the case of his own child, who was the subject of a nævus on the forehead as large as a walnut, which disappeared during an attack of whooping-cough.

Mr. CROFT quoted a case, and advised that whenever a white spot, as indicating atrophy, was found in the nævus the growth was best left alone.

Mr. BARWELL thought that cutaneous nævi, commencing before puberty, and subcutaneous growths of the same kind also, generally disappeared, that deeper ones remained, and that Mr. Watson had not yet seen the termination of his case.

Dr. THOROWGOOD read notes of two cases of the

CURATIVE ACTION OF IPECACUANHA IN DIARRHŒA.

Case 1.—William B——, aged twenty, after passing through an attack of typhoid fever, remained subject to obstinate diarrhœa. He improved somewhat, and was discharged from the West London Hospital in February, 1872. On January 1st, 1873, he was readmitted, having been for some time under the care of Dr. Ferrier, as an out-patient with diarrhœa. When admitted, he had, on an average, ten or twelve liquid motions in the twenty-four hours. These were repeatedly examined, and found of a red colour from admixture with blood; a small amount of shred-like substance was also mixed with them. The patient was not much emaciated; he had a fair appetite, no sickness, no night-sweats. His pulse was from 88 to 100; temperature 99°. The abdomen was tense and swollen, and at the left iliac region tenderness was very evident. He had had some chronic mischief at the base of the right lung, but this seemed to have subsided. The urine was loaded with pale lithates, and free from albumen. Treatment consisted in rest in bed, with milk diet and a mixture of chalk with bismuth. After a week, being no better, and it being observed that the bowels acted rapidly after food, he got for a few days iodide of potassium, with two drops of liquor arsenicalis. This mixture made him worse, and it was soon stopped. About the middle of January he was put on a diet of solid meat instead of milk; and had nitrate of silver with opium, decoction of logwood, injections of starch with tincture of opium and powders of mercury with chalk, and Dover's powder. None of these methods produced any change for the better, and the motions had the same characters as before. There was not much complaint of pain and tenesmus. During the first week in February he was ordered two grains of powdered ipecacuanha, with five grains of compound tragacanth powder, thrice daily, in water. On this medicine he soon improved, and the dose of ipecacuanha was raised to five grains. On February 26th the diarrhœa had ceased; he was passing formed motions, and was allowed to leave the hospital.—Case 2 was that of a young man who for the last six years had been troubled with diarrhœa as a result of wet and exposure in his work as a bricklayer. He usually had six motions in twenty-four hours, liquid, and often mixed with blood. At times he had to lie up for a few weeks. Pain was felt over the region of the liver; the chest was healthy. This man had taken much physic, and he now had two grains of powdered ipecacuanha, with five grains of compound tragacanth powder in water, thrice daily. In one week, he said he was better than he had felt for the last six years. For the last three days he had passed one consistent motion daily. A few weeks later he came with return of diarrhœa from exposure to wet. He got solution of pernitrate of iron, and this failing to relieve, Indian bael was tried to no purpose. He requested to have the powders again, and under their use he seemed to recover completely. Dr. Thorowgood considered that these two cases of obstinate chronic disease, having apparently no inherent tendency to spontaneous cure, were capable of well illustrating the action of such a drug as the pulv. ipecac. The fact, also, of the remedy acting so well when given pure and uncombined was worth consideration.

A discussion ensued on the treatment of chronic dysentery by ipecacuanha, in which Dr. Church, Dr. Duckworth, Dr. Greenhow and others took part; and the discussion was closed by a brief reply from Dr. Thorowgood.

Reviews and Notices of Books.

Principles of Animal Mechanics. By the Rev. S. HAUGHTON, M.D., D.C.L., F.R.S. pp. 495. Longmans. 1873.

THE author of this work has brought to his task, or rather, as he holds it, labour of love, the rare combination (why should it be *rare* in so learned a profession as ours?) of a competent knowledge of human and comparative anatomy on the one hand, and of geometry and the higher analysis on the other; and to this is added the laudable desire to trace in His works the wisdom and goodness of the Creator.

In discussing the nature of muscular fibre, the author adduces one or two points to which we cannot altogether assent. He alludes to the observed smallness of diameter of female muscular fibre, compared with that of males; and ascribes to this cause an assumed greater power of endurance of female muscle, as exemplified by the facility with which the wife or nurse, as the case may be, will carry a baby, compared with the husband: we suspect that the training of the biceps and brachialis anticus, in the one case, and its absence in the other, has much more to do with the power of endurance in question. Again, the author propounds a new theory of the cause of striation in muscular fibre—namely, that it arises from longitudinal compression, and is analogous to what is well known as "slaty cleavage," which has been shown by Tyndall to be developed by compression in any perfectly homogeneous and plastic substance, as a piece of wax. The author assumes the contraction of unstriped fibre to be vermicular; be it so, but it is nevertheless longitudinal, and in some cases, as in the intestinal canal, incessant, yet no striation results; whereas the striation is complete in any voluntary fibre, that may perhaps never yet have been called into action.

The amount of dynamical work done by muscles alternately contracted and relaxed is investigated (pp. 44–62). The result arrived at as the mean of several kinds of labour is about 354 foot-tons,* or 2·3 foot-pounds per ounce of muscle per minute.

The author next proceeds to determine the absolute force of muscles, and assigns its value to be about 102·5 lb. per square inch of section. He points out several objections to the estimates given by Borelli, first from the uncertainty as to the weight of the "pound" he employed; and,

* We need hardly remind our readers that a foot-ton and a foot-pound are the amounts of energy that bodies weighing one ton or one pound respectively would acquire in falling freely through the vertical space of one foot; or, in other words, the amount of energy expended in raising these weights respectively through the space of one foot.

secondly, from his imperfect acquaintance with mechanical principles; for instance, he falls into the common error of doubling the actual tension of a muscle, on the ground that since the points of origin and insertion are reciprocally drawn towards each other, the action of the muscle must be the sum of these two pulls; whereas in all cases a pull or tension necessarily implies a simultaneous action on two points.

In investigating the relative action of different muscles, the author assumes, and has to a certain extent confirmed by observation, that on the principle of least action, so abundantly confirmed in nature, the strength of each tendon is exactly proportional to the strength of the muscle attached to it; he also makes the legitimate assumption that the strength of the tendon is proportionate to its transverse section. He then determines the relative values of the cross sections by taking equal lengths of the tendons, drying and weighing them, and thence infers the relative strength of the muscles; assuming, with much probable reason, that the tendons are less likely to be affected by the casualties of temporary disuse, disease, and death, than the muscles themselves. This is a fair specimen of the care and forethought with which his numerous experiments and observations have been conducted.

No exception can probably be taken to the author's determination of the total work done by the heart; but in estimating the amount of muscular force necessary to accomplish that work, it seems to us that the form and internal area of the surface of the ventricles ought to be taken into account. The point may be thus illustrated: suppose two india-rubber bags, one having twice the area of the other, to be connected with the lower ends of two vertical tubes of equal section, and partially filled with fluid; it is obvious that a board weighing ten pounds placed on the larger bag will raise a column of fluid to the same height as a similar weight of five pounds placed on the other; or if the bags be supposed to be elastic, tensions of ten and five pounds respectively will have the same effect, although under suitable constraint the *capacities* of the two bags may be the same. The bearing of this illustration on the heart is obvious.

About 200 pages of the work are subsequently devoted to an elaborate investigation of the mode of action of different kinds of muscles. The simpler forms of the prismatic and penniform muscles present little difficulty, and the remarkable result is arrived at that in these two forms the power is, *cæteris paribus*, the same (p. 168); but the more complex forms present much greater difficulties, and to these the resources of analysis, including geometry, are both skilfully and elegantly applied. To appreciate these, our readers must be referred to the work itself.

In p. 184 the author finds the *loss* of work in the biceps femoris of the lion, in consequence of the triangular shape of the muscle, to be about 12 per cent. But it must be borne in mind that in many cases this apparent loss, so far as motion is concerned, is principally, if not wholly, effective in retaining the elements of a joint in apposition. This is especially the case with muscles enveloping ball-and-socket joints.

As an illustration of the perfect adaptation of means to ends, the author arrives at the conclusion (p. 293) that in the wing of the albatros the work done by rotation of the wing round its observed socket differs by only $\frac{1}{71}$ part from the calculated possible maximum work.

In investigating the actions of skew muscles, the author gives an amusing account of the exploits of the celebrated greyhound "Master Magrath," and then proceeds to investigate the condition of his muscles.

The general laws and results which the author infers from his researches towards the conclusion of his work are most important, and fully entitled to the careful consideration of our readers. We may adduce the following (page 387):—

"Each muscle is constructed in relation to its joint in such a manner as to perform one kind of work only; and it performs that work to maximum advantage.....The number of muscles employed is determined by the number of distinct actions required from the limb.....The shape and form of the bones employed are the necessary consequence of the shape and power of the muscles in action."

And the author infers that—

"The profound study of the mechanism of the joints lends no support to the postulate, that the similarities found to exist in the bones, muscles, and joints of animals may be explained by common descent from a common ancestor."

To those of our readers who have a slight acquaintance with algebra and geometry we heartily commend the author's reasoning in applying the "principle of least action" to the arrangement of the muscular fibres of the heart—(pages 430 to 442).

We may remark, in conclusion, that the author shows satisfactorily (page 445 *et seq.*) that in an empirical formula formed by Mr. Jevons for the relation between weights thrown by the arm and their maximum distance, a constant which Mr. Jevons stated he was unable to explain on mechanical principles represents in fact the weight of the arm which the muscles are required simultaneously to move.

Principes d'Electrothérapie. Par le Dr. E. CYON. pp. 274. London: Baillière. 1873.

THAT an agent so powerful as electricity, one that can so easily be applied, and which when applied sometimes produces such immediate and striking effects, is destined to take a conspicuous place in the treatment of diseases of the nervous and muscular system no one will probably be now disposed to deny. The complexity of the laws which attend its action, making such action often appear to be exceptional and variable, the time required for its due application, and the general ignorance that exists even amongst fairly educated medical men of the elementary facts of electricity, have all tended to prevent the adoption of this agent as a means of cure; and to transfer it, with a few notable exceptions, to the hands of charlatans, whose only object has been to make money, and who, on the strength of an occasional brilliant success, have traded upon it till it had become a byword and a reproach. The only remedy for this state of things is improved knowledge—knowledge founded on experiment, by means of which absurd theories and ridiculous or impossible explanations may be exposed and replaced by a solid foundation of truth and fact. The work before us, by a distinguished experimentalist and physiologist, has this aim in view, and will, we are sure, be read with satisfaction by all who take an interest in the advancement of medicine.

The first 120 pages of this little *brochure* are occupied with a description of the well-known electrical properties and relations of nerve and muscle, and although the whole is written with French lucidity, there is little or nothing of a novel nature that demands notice. The remainder of the work is devoted to the practical application of this knowledge to the human subject, or what may be termed the electro-physiology of man; and we here meet with a considerable amount of original research. M. Cyon first set himself to determine whether, if a constant current were made to traverse a living human nerve, the same effects were produced as those already obtained by Pflüger in the sciatic of the frog. Many difficulties presented themselves

both in the selection of the nerve and in the mode of experimentation to be adopted. After mature consideration, the ulnar in the upper arm was chosen for the transmission of the constant current, whilst the lower part of the nerve was tested by induced currents. The modification in the irritability of the nerve occasioned by the passage of the constant current was estimated, (1) by the amount of excitation required to produce the slightest degree of contraction, and (2) the force of the contraction itself, as measured by the myograph, the last being much the most certain and satisfactory. In most of the experiments, the results of which are given by M. Cyon, the effects produced in man are precisely in accordance with those which occur in the frog, and exemplify the truth of Pflüger's conclusions. Here and there, especially in disease, exceptions occur; but this holds, as is well known, in the frog also, the nerves of some animals failing to give the ordinary reactions. He has incidentally established the correctness of the view long ago maintained by Fick, that the degree of contraction of a muscle is proportionate to the intensity of the irritation acting on the nerve.

M. Cyon explains very well the most important principles of local electrisation as the differences in the effects that are produced according to whether the electrodes are dry or moist and large or small, be pressed strongly or gently on the skin, whether the current be weak or strong, and the muscles be excited to contraction directly or through the intermediation of the nerve. Rules are laid down where the several nerves may best be reached that are commonly excited, and a wholesome caution given of the danger of transmitting strong currents through the brain, not only on account of the vertigo and fainting that may be produced, but because rupture of the vessels appears to be a possible event, if the current be strong enough to produce any effect at all upon the deeper-seated parts. Galvanisation of the spinal cord, on the other hand, he observes, is sometimes followed by the most marked beneficial effects, which he attributes to some modification of the nutritive functions.

How much remains to be done before any rational explanation can be given of the curative effects that sometimes follow galvanisation of the sympathetic in the neck, as in cases of atrophy of muscles, lead paralysis, &c., is evident from the fact pointed out by M. Cyon that in galvanising this nerve, as usually performed, the vagus and the depressor nerves, as well as the inferior laryngeal and the descendens noni, are all irritated; and it is impossible to say to which the effects observed are due, especially since several of them, as the vagus and the depressor, govern much larger regions of the body than the ascending sympathetic. A point of importance in regard to the action of constant currents to which sufficient attention is not generally paid is the length of time they should be applied. As in most cases it is requisite that the current should pass for at least a quarter of an hour, or even for half an hour, what benefit can be expected to result from a momentary contraction?

Upon the whole, Dr. Cyon's contribution to electrotherapeutics seems to us a useful one, not so much for the original research contained in it, as for the broad and general view it takes of the subject, and it may be advantageously read by all who are engaged in the study of nervous diseases.

A MERCHANT captain was prosecuted lately at the Shanghai Police Court, under the fourth section of the Merchant Shipping Act of 1867, for failing to provide a proper supply of antiscorbutics for the use of his crew. He was fined 100 dollars and costs, and the official Log was impounded and sent to the Board of Trade, as no entries of sickness had been made.

Foreign Gleanings.

INFLAMMATION OF THE CORNEA THROUGH SEPTIC INFECTION.

Dr. Leber having inoculated the cornea of rabbits with little heaps of leptothrix buccalis, stated the production of intense keratitis with hypopion, with a remarkable tendency in the inflammation to spread to all the other parts of the eye; and though in no instance could Dr. Leber discover any multiplication of the leptothrix, it was probable that some septic principle had been introduced, as purely mechanical or chemical irritation of the cornea does not determine this characteristic inflammation. Furthermore, Eberth's experiments have shown that inoculation with septic matter produces diphtheritic keratitis with a like tendency to spread. The author thinks he is justified in attributing to septic infection Sämisch's ulcus corneæ serpens, with rapid inflammation of the various membranes of the eye. In like manner, an insignificant lesion of the cornea, complicated with affection of the lachrymal sac, may become the starting point of keratitis with hypopion, through the infection produced by the lachrymal secretion in process of decomposition.—*Centralblatt für die Gesam. Med.*, No. 9, 1873.

EXPLORATION OF THE RECTUM BY MEANS OF THE WHOLE HAND.

In the *Archiv für Klinische Chirurgie*, Dr. G. Simon states that it is possible to introduce the whole hand into the rectum without producing any serious lesion. Dilatation may be performed with or without previous section of the sphincters. The patient being under the influence of chloroform, two fingers are gently introduced, then three, then the whole hand, and even the forearm. After the hand has reached the sacro-vertebral angle the fingers may be extended into the abdominal region, and explore the situation from the kidney to the umbilicus, without any danger. In this manner affections of the uterus, the ovaries, and even the stomach and spleen, may be diagnosed with greater certainty. On introducing only one half of the hand the base of the uterus and the ovaries may be explored. In men the fundus of the bladder can be examined, and the existence of calculi detected. In two cases of ovarian cysts, Dr. Simon was enabled by his procedure to make out the length and thickness of the pedicle, the absence of adhesions to the walls of the pelvis, and the existence of fibrous tumours in the fundus of the uterus. The diagnosis was confirmed by the operation. Furthermore, Dr. Simon thinks that dilatation with the whole hand may become a means of curing fissures.

NOCTURNAL INCONTINENCE OF URINE CURED BY CHLORAL HYDRATE.

Dr. Girolemo Leonardi has recorded in *Raccoglitore Medico* five other cases of the above, in which the use of a solution of chloral hydrate was entirely successful. The patients were all aged eight to ten, and the disease had resisted various means which had been previously employed. In all the cases the cure was effected most promptly, and was permanent. The dose was from seven to fifteen grains in about an ounce and a half or two ounces of water, taken at once or in two doses. In some cases the very first dose was successful, in others five doses were necessary to effect the cure. The drug was administered in the evening, two hours at least after food, and Dr. Leonardi strongly recommends that the patient should drink as little water as possible.

ELIMINATION OF OXIDE OF CARBON.

From a series of experiments recently communicated by Dr. Grehant to the Society of Biology of Paris, it results that oxide of carbon, contrary to what has been recently stated, is eliminated as oxide of carbon without being transformed in the organism into carbonic acid. Moreover, a thousandth part of the toxic gas existing in the atmosphere is enough to prevent the elimination of the poison. It therefore follows that in cases of asphyxia the intoxicated subject must be placed in a perfectly pure atmosphere in order to revive.

THE LANCET.

LONDON: SATURDAY, MAY 24, 1873.

MR. HEADLAM'S Bill still lingers. From all accounts it is in a moribund condition, and it is doubtful whether it will survive till Monday next, the third time fixed for a second reading. If the profession is disposed to feel anything but gratitude to Mr. HEADLAM and his associates in the matter of the present Bill, it must allow that they have done one great service—viz., they have brought the whole subject of Medical Reform again under discussion, and brought into relief the sort of legislation that will not meet the case. Yet there is much that is plausible in the Bill. It is essentially an *ad captandum* measure. Everybody is meant to be flattered and pleased by it. The Government are to be won by the charming imitation of their own proposals of 1870; the "Bodies" are to be conciliated by being allowed to construct the Examining Boards, and to retain their individual representation in the Medical Council down to the University of Durham and the Apothecaries' Hall of Ireland; the profession is expected to swallow the measure without asking questions, for the sake of the six direct representatives. Yet nobody will have the Bill, as far as we can make out. We have not heard of any violent desire for it even in the British Medical Association. There has been no public meeting of that body, nor any other outward and visible sign that the Bill would satisfy even the Association. The Government, if all accounts be true, will not support the measure. Even the Corporations are petitioning against it; and the Edinburgh College of Surgeons—which suggests to us that useful and genial member of the Medical Council, Dr. ANDREW WOOD, who distinguished himself in 1870 by supporting the Bill *plus* direct representation, and is the author of that ingenious idea, so thankfully used lately in the dearth of others, that a larger Council would do the work better than a smaller one by giving material for more committees—even the Edinburgh College has petitioned against the Bill, and, if legislation must take place, for previous inquiry by a Select Committee. The profession at large has treated the Bill with that indifference which is the form of opposition to be expected from busy men who believe in practical measures. This general indifference to a measure that is meant to take is worthy of being studied a little. It must have an explanation. And the explanation is not far to seek. It seems to us easy, but twofold.

The Examination Boards proposed by the Bill would be impracticable and costly.

This objection, which has been made by us persistently for years, is now made everywhere, from *The Times* downwards, and is well stated in the petition of the Edinburgh College of Surgeons to which we have referred. Let it be remembered that there are seven medical bodies in England, five in Scotland, and five in Ireland, of the most various character and having the most various and opposite interests. These bodies, dating from "the centuries behind us," were made to act independently of each other, in times when surgery was considered something entirely distinct from medicine and medicine from surgery, and when provincial and parochial ideas possessed men much more than imperial ones. To ask seven bodies to agree in England to form one Board, five in Scotland, and five in Ireland, is to be unreasonable, especially when money questions crop up immediately. It is not only unreasonable, but unbusinesslike; especially when the excuse for refusing to do it is amply afforded in the complete and utter failure of the Bodies to agree among themselves in the last two years. If any person is disposed to be angry with the Bodies, let him first consider how much human nature there is in Bodies. To get seven Englishmen to agree on any matter involving compensation and privilege, to say nothing of Irishmen and Scotchmen, is a difficult task. Bodies are far more complicated and touchy things than individual men, especially if they are old and have enjoyed exclusive privileges, and are by so much less adapted to act together. The schemes put forward by a few Bodies in England and Ireland, respectively, would simply throw all the licensing work into the hands of Scotland, where they can manage to examine students for half the sum required by the Conjoint Schemes of the other divisions of the kingdom. Nobody has seriously attempted to refute this objection.

Then, again, *the Medical Council proposed by* Mr. HEADLAM'S *Bill is utterly distasteful to the profession.*

Addition to the Medical Council is out of the question. Even the British Medical Association will surely never consent to an enlargement of a body already twice too big. Nothing, surely, in the way of direct representation will reconcile it to such a proposal. We will make even the most favourable supposition, and imagine that the Association's own Reform Committee were added bodily to the General Medical Council, and that we had to add to our loaded columns, during the sitting of the Medical Council, the speeches of Dr. WATERS and his colleagues, eloquently trying to make all the horses drink that had been brought by the Bill to the waters of Conjunction. Would such a result compensate even the Association for a Council of thirty? The Reform Committee group contending valiantly with nineteen corporations would be a sight to stir the admiration of good men; but on arithmetical principles it could only end in the triumph of the nineteen, which would turn the admiration of good men into grief. If the proposal to enlarge the Medical Council seems objectionable to members of the Association, how must it strike members of the profession? Who, then, can wonder that a Bill three-fourths of which is a servile imitation of the Government Bill of 1870 is regarded without favour alike by the Government and the profession and the corporations? Still, let us be thankful to Mr. HEADLAM for having shown us how not to do the work that needs to be done.

THE recent appearance of cholera at Widdin, and the establishment of quarantine on the Bosphorus against the Danubian ports, mark the first active movement of the epidemic in Europe this year. It may be useful, there-

fore, at the present moment to recall the leading facts of the epidemic from its beginning to this date.

Commencing at Kiev in 1869, cholera towards the close of that year and in the course of 1870 spread somewhat widely in South Russia and Little Russia, and it appeared both in Moscow and St. Petersburg. In 1871, according to the official report prepared by Mr. NETTEN RADCLIFFE, which appeared as a Parliamentary paper last session, the disease was diffused generally throughout Russia in Europe. It extended from the north-east of the Black Sea and the Sea of Azov in the south to the south coast of the White Sea (Onega and Archangel) in the north; and from the Polish frontier and the Baltic frontier in the west to the Ural Mountains in the east. The disease prevailed also in Ciscaucasia along the course of the Kouban; and in Transcaucasia it was found in more than one locality. It extended also into East Prussia, attacking Königsberg, Memel, Elbing, Stettin, Swinemunde, and the neighbouring districts. Scattered cases were reported in Berlin, and outbreaks occurred at Hamburg and Altona. Hernosand was attacked in the Gulf of Bothnia, and Constantinople on the Bosphorus. Later in the year the epidemic appeared in several of the Danubian ports.

Cholera lingered through the winter of 1871–72 in Constantinople, and in more than one of the Baltic ports. In April, 1872, the disease broke out with considerable violence in the upper part of the valleys of the Dniester and Pruth, and subsequently it extended widely westwards in South Russia and Little Russia, and eastward it passed into Galicia. To the north cholera spread from Little Russia into Great Russia, attacking the districts of Kazan, Nijni-Novgorod, and Tver, and the intermediate districts; and to the westward of these districts it appeared again in an active form in St. Petersburg, Narva, and Reval. Isolated outbreaks also took place at Helsingfors in Finland, and at Gefle in Sweden. In West Russia a few districts were infected, and in Poland cholera showed itself in Warsaw.

Although the dissemination of cholera in Russia in 1872 was wide, the local outbreaks were, as a rule, little considerable as compared with those of the previous year. The chief interest of the epidemic in 1872 rests with its spread into Central Europe. There was a slight and unimportant extension across the Polish border into East Prussia in October; but with this exception West Europe escaped. In Central Europe, however, the epidemic underwent a considerable development. Appearing first in Galicia in April, it spread throughout that province and Moldavia, and subsequently crossing the Carpathians it extended widely, although the outbreaks appear to have been much scattered, in Hungary. Later in the year, numerous districts in Moravia and Austrian Silesia, and several in Bohemia, were attacked.

As illustrating the losses caused by the epidemic in 1872, we may state that in St. Petersburg, from the 23rd of June to the 9th of October, 3500 persons were attacked, and 1700 deaths recorded. In Kiev, which suffered more severely from cholera last year than in 1869, there were 3413 seizures and 1663 deaths. In Galicia, to the 31st of December, cholera had prevailed in 46 districts and 346 localities; and in these localities there had been 6850 attacks and 2172 deaths, while at the date given 1208 cases, distributed in 211 places, still remained under treatment. In Pesth, from the 18th of October to the 28th of December, the seizures from cholera were 982, the deaths 404. In Buda, during the same period, the seizures were 764, and the deaths 274.

Throughout the past winter cholera prevailed more or less in parts of Galicia, Moravia, Austrian Silesia, Bohemia, and Hungary. The disease disappeared from Silesia in the course of the past month; but it still exists in parts of Galicia, Bohemia, and Hungary. The cases were not numerous last month in the two former provinces; they were most numerous in the latter. About the same time as the extension of cholera down the Danube to Widdin the disease is reported to have reappeared in Pesth.

We shall not attempt to forecast the future of Western Europe as to cholera this year. The Berlin correspondent of *The Times* stated a few days ago that upwards of 100 deaths from cholera had occurred in St. Petersburg during the month of March; and that the municipality of Berlin, on the receipt of this news, had resolved to take time by the forelock and initiate precautionary measures against the epidemic. The Russian official journals are as yet quite silent as to the presence of cholera in St. Petersburg; but, having regard to the reticence of Russian officials, this silence is not altogether reassuring.

THE opponents of the Contagious Diseases Acts have been signally defeated in the House of Commons, and prejudice and passion, we rejoice to say, have not triumphed over reason and common sense. The time had come for Parliament to consider whether a very useful piece of legislation was to be abandoned or not; and pressure had been put upon the Government to repeal what Sir J. S. TRELAWNY has characterised as the most benevolent Act of the century. We had every reason to hope and believe, however, that the Government intended resisting these ill-advised attempts on the part of a small section, and we have not been disappointed. Pressure of time prevents our discussing at length the recent debate in the House of Commons; but we have no need to reiterate the arguments—to our minds conclusive—that have been used in support of these Acts. We agree with Sir JOHN PAKINGTON in thinking that it was the duty of Her Majesty's Government to meet the motion of the honourable member for Cambridge with a distinct negative. It was essentially a Government question, affecting the morals and health of the people. After the emphatic language of Mr. J. D. LEWIS, the member for Devonport, who spoke from personal knowledge as to the beneficial operation of these Acts, we are not surprised that the House of Commons refused to be influenced by exaggerated views and statements which are the offspring of sentimentalism, ignorance, or prejudice. Making every allowance for religious prejudices and for theorists who are never able to regard any question from a practical point of view, we still fail to understand the opposition to this measure of those who recognise a right on the part of the State to legislate for the prevention of any other contagious disease than this, or to prohibit persons from carrying on trades

that are dangerous to the community. Some documents have lately been presented to Parliament which demonstrate the beneficial effects of these Acts from a physical and moral point of view. The first consists of a series of tables, furnished by the War Department to the Home Secretary. These have been drawn up by Dr. BALFOUR, F.R.S., the late head of the Statistical Branch of the War Office, and signed by the Director-General of the Army Medical Service. Of the perfect impartiality of Dr. BALFOUR there can be but one opinion; for it is well known that he was rather opposed to the principle of the Acts than otherwise, and that it was a consideration of his own figures which carried conviction to his mind. The tables comprise the results obtained from the returns of twenty-eight stations in the United Kingdom, being all the stations at which the force was 500 men and upwards. These results are very clear, and ought to leave no doubt on the mind of anyone. How so shrewd and practical a man as Mr. MUNDELLA could contend in the face of these tables that contagious diseases had been steadily decreasing, both in the army and navy, for some years, and that such decrease was not attributable to the operation of the Acts, is more than we can comprehend. The operation of the Contagious Diseases Acts has been remarkably successful as far as the limitation of contagion is concerned. In 1864 the Act was passed, but it did not come into operation until the following year. The admissions in 1864 at these twenty-eight stations were in the ratio of 108·6 per 1000 for the primary form of that disease most likely to produce grave constitutional deterioration; while in 1872 the admissions were 54·2 per 1000 for the same form of disease at fourteen stations under the operation of the Acts. Again, if the average of the eight years during which the Acts have been in operation be taken, it will be seen that at the stations not under the Acts, in an average force of 32,500, the ratio of admissions was 103·1 per 1000; while at the stations under the Act, in an average force of 31,000 men, the proportion was 63·0 per 1000. If the results of 1872 alone be compared, the admissions show a difference of 68·9 per 1000 in favour of the stations under the Acts. On the average of five years the proportion per 1000 of mean strength constantly in hospital with the form of complaint of which we have been speaking, at the stations not under the Acts, was rather more than double that of the stations under the Acts.

WHEN first the Adulteration of Food Act was passed, we hailed its appearance with very considerable satisfaction, not because we overlooked or were insensible to its many defects, but because we recognised in it the first really serious attempt to deal by legislation with a gigantic evil, injurious alike to the health, the morals, and the pockets of the people. It was the first compulsory measure dealing with this great question; and the penalties, including the publication of the names and addresses of the offenders, and even their imprisonment, were to some extent commensurate with the serious nature of the crimes committed and the guilt incurred.

Well, this Act has now been for some months in operation, and the misgivings entertained from the first have been more than realised. We do not say, with many others, that the Act has been a complete failure; on the contrary, we believe that, while it has grievously disappointed the hopes of its sanguine friends, it has really effected a large amount of good; this it has done mainly by its deterrent effects, and partly by the exposures occasioned and the penalties inflicted. It is true that the attempts hitherto made, too often unsuccessfully, have brought out strongly the defects of the Act—defects foreseen by many persons really conversant with the subject, and have prepared the way, we earnestly hope, for future and more efficient legislation.

The chief defects of the present Act are—the want of a definition of adulteration; the complication of the details as to the procuring of samples; the fact that only those articles *suspected* to be adulterated may be purchased by inspectors for the purpose of analysis; that knowledge of the adulteration charged on the part of the vendor must be proved; and that the adulteration must be of such a nature as can be shown to be injurious to health. In any amended Act it would be easy to remedy these vitiating defects; especially should it be made to deal with adulteration pure and simple, and quite independently of its being injurious or not; and knowledge on the part of the seller ought not to be required. If the dealer were made in all cases responsible, he would soon find ways and means of protecting himself even against the adulterations practised by foreigners, as in the case of the adulteration of tea by the most ingenious sophisticators in the world—the Chinese.

Lastly, any amended Act should be so framed as, on the one hand, to deal with articles—as, for example, milk—which have suffered by the abstraction of any of their important constituents; and on the other, to prohibit, under penalties, the sale of unsound articles of food—meat, vegetables, fruit, &c. In a word, the Act should be so framed as to ensure, as far as possible, the *purity* of the food we consume.

Medical Annotations.

"Ne quid nimis."

"THE TIMES" ON MEDICAL REFORM.

THE article of *The Times* of Monday last places all the points of the question of Medical Reform admirably before the public and the Legislature. The essentially antiquated character of existing arrangements, especially as regards the number of the licensing bodies and the one-sided character of the diplomas they grant; the "vicious" constitution of the Medical Council, as made up of bodies too much interested in medical education and medical examinations to be the controlling authority; the impracticableness and inadequacy of Mr. Headlam's remedy for existing evils—viz., conjunction of numerous bodies never meant to conjoin, and the injustice of it as involving far too large a fee for a mere licence,—are clearly shown. It is, of course, very gratifying to us to see such an exposure of the faults of the Medical Act and of Mr. Headlam's Bill for its amendment in a leader in *The Times*. It is still more so to see that journal so decidedly in favour of the proposals of the Bill introduced by Dr. Lush, and generally known as THE LANCET Bill. The promoters of that Bill did not expect it immediately to become law, and they may well be satisfied to see its main proposals set by *The Times* in marked preference against the pro-

posals of the Bill at present before the House. It may now be confidently hoped that these proposals will form the basis of any permanent legislation on the subject.

A FRUITLESS EFFORT.

DR. THOMAS BALLARD is one of those enthusiasts who keep alive the traditions of the golden age in which medical science was an affair of the imagination quite as much as of induction. His theory of "fruitless sucking" has long since marked him out as the undisputed leader of our *a priori* pathologists; but even that achievement has not sufficed for his ambition, and on Thursday week he revealed a still more remarkable conception. Dr. Ballard has discovered that *there is no such thing as hereditary syphilis!*

We have felt it necessary to pause after this announcement, which must have completely taken the breath out of everyone who has heard or read it. We have occupied the interval in glancing over the report of Dr. Ballard's paper, which will be found in another column, and it was with a sigh of relief that we perceived that the author had in no way changed his well-known method of scientific investigation. It is by a green and flowery path that he leads us, and we seem to be listening to the noble (though slightly somniferous) discourse of some academic philosopher. It is true that he now and then relates a case, just as the speakers in Plato's Dialogues sometimes mention the odd things that Herodotus had seen and heard in Egypt or elsewhere; but it seems merely to serve the same purpose as a nail or other casual projection serves for the spider, who goes on spinning his web from independent resources. Alas for the decay of ancient faith! Even the gentle Harveians, who have meekly borne with many "hard sayings" from their philosophical president, appear to have broken out on this occasion into open incredulity. It is quite painful to read their peremptory rejection of the theory which had been offered for their acceptance. They would *not* believe that "syphilitic" fœtuses were nothing more than unusually macerated abortions, nor that "snuffles" was only infantile catarrh, nor that coppery nates were merely due to chafing, nor that nurses could catch syphilis from infants that had never had it, nor, in short, any one of the principal points involved in Dr. Ballard's remarkable theory. It is sad indeed to see the work of half a lifetime expended on the elaboration of beautiful truths which a thankless world rejects as obstinately as any of Mr. Val Prinsep's violent little black pigs could have rejected an offer to feed him with seed pearls!

THE ASHANTEE EXPEDITION.

THE Government has evidently taken alarm at the threatened invasion of our West-African colonies, and we may soon expect to be engaged in a little war. The King of Ashantee is said to be pressing on Elmina in great force, and will no doubt subsequently advance to attack our garrison at Cape Coast Castle. The last mail brings intelligence of a battle having been fought on the 18th April, in which the Fantees were defeated and were retreating towards the coast, and they were flocking into Cape Coast in large numbers. In fact, no reliance can be placed upon our native allies, who are retreating all "along the line." The King of Ashantee and his followers will not, however, prove the most formidable enemy that we shall have to encounter. The climate, especially at this season, is notoriously a bad one, and its diseases are as likely to inflict quite as much injury on our force as its arms are on the enemy. What we have to desire above all things is that the Ashantee potentate, emboldened by success and the size of his army, will afford our troops the earliest opportunity of fighting him, for a long campaign or any expedition into that country can scarcely fail of proving disastrous to the health of any British force we may have to send there. The advent of the rainy season will prevent, we presume, much being done at present beyond strengthening the garrison of Cape Coast Castle. Meanwhile, the authorities at home evidently consider the present aspect of affairs on the Gold Coast as very threatening. A body of Royal Marines have already started, and a steamer conveys a wing of the 97th Regiment to Barbadoes to relieve one of the West Indian regiments about to proceed at once to the Gold Coast. The several departments are making active preparations for the equipment of the force. It is rumoured that Dr. A. D. Home, V.C. and C.B., will proceed as the principal medical officer of the expedition. Considerable quantities of quinine will no doubt be consumed as a prophylactic and remedial agent against the fevers of the country by the men taking part in it, and we venture to hint that the opportunity might be embraced for trying those alkaloids obtained from chinchona, of the effects of which the Madras Commission have spoken so highly in their published reports, to which we have this week called attention. The Ashantees appear to have suffered great losses, and small-pox is said to be very prevalent among them.

OUT-PATIENT HOSPITAL REFORM.

WE have received from an anonymous correspondent a letter calling our attention to one which he has published in a contemporary, and in which he says that "the editor of THE LANCET states that if he be furnished with twenty instances where persons who were able to pay for medical attendance have applied for and received out-door gratuitous relief, he will not only recant the error of his ways in opposing the Association, but will also join his forces to theirs, in order to help them on in the movement they are now engaged in." It is very difficult to know how to deal with a writer who has our words before his eyes, and yet so entirely misrepresents them; but we may be allowed to point out that we never said anything of the kind. We said that if Mr. Richards would support his opening by adequate proof, we would recant the error of our ways; and Mr. Richards's opening is many degrees stronger than the mild averment which is put into our mouths. We did indeed suggest that Mr. Richards should wean his mind from the contemplation of a "large number of cases," and that he should select twenty and substantiate them, giving such data as would permit impartial persons to judge of the merits of each. Another writer professes to have done this, and has sent us a list of grievances, seven in number. These cases as stated may or may not be to the purpose, for no data for determination either way are afforded; and what we want the Reform Association to see is that, if they would do any good, they must escape from vagueness. We are quite ready to admit that hospitals are abused in some cases; but we believe, after long and varied experience of their working, that the instances of abuse are much less flagrant and less frequent than has of late been alleged. If Mr. Richards were to put forth twenty cases, we should expect nineteen of them utterly to break down under examination; and, in point of fact, we do not think that the evil of resort to hospitals by persons really able to pay exists in a sufficient degree to be worth the trouble of any special measures to guard against it. Moreover, we regard the proposed remedies as particularly objectionable, chiefly because we think it is for the general good of the community that hospital doors should stand very widely open, and that there should be easy access to the aid they are intended to

afford. We would rather see a dozen unfit persons attended for nothing than we would see a single case of disease lapse into an incurable condition because some sensitive or timid poor person shrank from being badgered by an inquisitorial official. Our fear is that the present agitation may diminish the usefulness of hospitals; but we have no belief that it will materially diminish any abuses that may be connected with them.

We will, however, make a suggestion. By common report, it is said that one well-known special hospital is the chief offender in the way of treating patients who are able to pay, and that a well-known general hospital is the chief offender in the way of perfunctory treatment by unqualified persons. Let the Association select these two hospitals (or others if they see fit), and make themselves fully masters of the facts concerning their working. If they can demonstrate to the public the existence of anything that can fairly be called an abuse, the force of public opinion will compel reform. But so long as they attack hospitals generally, and make only such statements as those to which we have referred, their ill-directed efforts can produce nothing but mischief and confusion.

It is also worth while for the Association to consider whether they have any guarantee that persons excluded from hospitals would resort to private medical practitioners. We think it more likely that they would in many cases seek the aid of druggists or quacks.

THE LAST ILLNESS OF JOHN STUART MILL.

MANY of our readers doubtless perused the short, but graphic and touching account of the fatal illness of the late Mr. John Stuart Mill that appeared in the columns of a daily contemporary. It brought the whole scene vividly before us. The philosopher's residence at Avignon, selected for its proximity to the tomb of his wife, the avenues of trees beneath whose shade so many of his later works were composed; the notes of the nightingales he so loved to hear that he would not permit the trees to be cut down lest the birds should be disturbed; and their tameness in following the doctor from tree to tree as he walked and meditated, in the intervals of his visits to the sick man's room, on the life of his eminent patient which was ebbing away; the calmness and resignation with which the man who has so greatly influenced the thought of this age heard of the probable issue of his sickness; the desire that he expressed that his funeral should be of the simplest; the fulfilment of his own wish that his bodily strength might not outlive his mental vigour, and the comparative absence of physical suffering attending his death. With a few delicate, sympathetic, and natural touches the scene was impressively depicted. The same writer has furnished us with brief details of his patient's illness. With the masculine vigour and remarkable clearness of intellect which Mr. John Stuart Mill undoubtedly possessed were united a tenderness and sensibility for which few of those gave him credit who dwelt upon the apparently feminine petulance of the politician rather than the calmness of the philosophical writer. As soon as his daughter-in-law, Miss Helen Taylor, found Mr. Mill's state to be critical she telegraphed to Nice to Dr. Gurney, who reached Avignon at 9 P.M. of Tuesday, May 6th. He found Mr. Mill had been suffering from erysipelas of a very severe type for two days past. His medical attendant had left him some time before Dr. Gurney's arrival, leaving an intimation that he was at full liberty to do what he thought best for his patient. Dr. Gurney found Mr. Mill with a quick pulse, pretty full, but very compressible, slight diarrhœa, and tongue coated with a whitish fur. "Chest-signs normal, but respiratory murmur very feeble, and some dulness over the lower portion of right lung. Chest generally narrow and contracted. The face, throat, neck, and chest, as regards its front aspect, covered with an erysipelatous eruption of a rose colour, intensely swollen on the right side, slightly so on the left, and here and there covered with patches of vesication, which soon after burst and discharged freely a clear serous fluid. With some difficulty I obtained a view of the palate, uvula, and tonsils, and found them much swollen, and with sore patches on both sides near the glands. The right upper eyelid was also denuded of the cuticle in parts, and discharging a watery fluid. The scalp was unaffected. I was told he had been slightly wandering, but on my arrival I found him to be perfectly collected, but restless. Considering his age and feeble state of health for some time past, the character and very extensive spread of the erysipelatous inflammation, and also that on the low-lying clay soil round Avignon erysipelas is endemic and very fatal, I formed the most unfavourable opinion of the case, and conveyed this impression, in of course appropriate terms, to his daughter and to himself. He received the information with calmness and resignation. I gave him two grains of quinine in solution every hour and a half, with three drops of tincture of aconite, and twenty of chloric ether added to the first two or three doses of quinine; subsequently he had the quinine alone in somewhat larger doses every hour; strong beef-tea at frequent intervals, and tea to relieve his thirst. I could not get him to take either wine or brandy. About 2 P.M. he rallied decidedly. The pulse was less frequent and firmer, and the swelling appeared less tense on the right side, but still travelled slowly downwards over the left chest, till two-thirds of the whole was occupied by the eruption, the entire right side down to the ensiform cartilage being already affected. He had no pain, except in the throat, especially after swallowing, but felt great distress from the heat and weight of the swelling. As the powdered starch I had applied did not relieve this, I applied a thin, light, hot and moist poultice covered with oil-silk over the whole chest, which he said made him feel much more comfortable. About 4 P.M. his pulse changed for the worse again, and became slightly intermittent, the eruption assumed a bluish appearance on the right side of the chest, and some angry spots appeared over his right instep. The right upper eyelid became rather less swollen, and he told me he could again see with that eye, but the lid exhibited decided sores, from which flowed a considerable watery secretion of a limpid character. No purulent fluid seemed to be secreted throughout the whole case. The great swelling prevented my again examining the throat, but from the fact that he had from time to time, after exertion especially, a thin watery râle, which subsided after a few seconds, I concluded that some serous fluid found its way within the glottis. The respiratory murmur now became less audible, the heart's action weaker, the pulse more intermittent, yet he himself thought he was better, and asked to be read to by his daughter. About 7.30 A.M. a sudden attack of difficulty of breathing came on, and he died in a few minutes of apnœa, which probably saved him some hours' further struggle against the poisonous influence at work in his system, and then death from asthenia."

POLLUTION OF RIVERS.

THE discussion which took place in the House of Lords last week on the second reading of this Bill indicates clearly enough what its ultimate fate will be. Lord Morley's statement on behalf of the Government was of the usual stamp—admitting the evil, but unwilling to apply the remedy—with which our modern statesmen have made us somewhat too familiar. We confess to having little patience

with the sort of criticism which fastens on one or two points of detail, perhaps fairly open to question, and thereby contrives to raise a prejudice against a measure which is in principle undeniably sound. It may be extremely difficult to define in precise terms what a "polluting liquid" is, but it is really monstrous to allow a technical point like that to obstruct such a sorely needed work as the rescue of our rivers and streams from the defilements to which they have so long been subjected. Lord Salisbury was especially great in small objections, which appear to have been thought amusing; the Rivers Pollution Commissioners were "eminent gentlemen," but evidently not "practical men" in his lordship's estimation. We write from memory, but we are much mistaken if Dr. Frankland and Mr. Morton have not adduced abundant testimony from those whom Lord Salisbury would admit to be "practical men" in support of their own position that river pollution, whether by sewage or manufacturing refuse, can be prevented without the "interference with industry" which the Government are afraid of, or with the "ditches" of landowners, which Lord Salisbury is so greatly concerned about. The Bill was read a second time by the Peers, but the Government are, according to Lord Morley, engrossed with "the whole subject of sanitary reform," and how, therefore, can they be expected to condescend, from so lofty a position, whence, if we will but give them time, they hope to scan the whole sanitary horizon, to trouble themselves about a mere fragment of the vast scheme which they wish to be understood is now "receiving their attention"?

FEMALE STUDENTS AT BIRMINGHAM.

THE capital of the Midlands seems to be about to succeed the northern capital as the scene of agitation for women's rights in respect of female medical education. The fact that a lady has efficiently performed for some months the duties of resident medical officer to the hospital recently founded for the treatment of female disorders only has emboldened some of the advanced thinkers of Birmingham to demand admission of female medical students to all the advantages offered by the Medical School of Queen's College, and the two hospitals attached to it. We learn from one of the Birmingham daily journals that "the proposal has met with favourable consideration by the teachers of that institution, though among the students opinion seems to be divided." We are somewhat surprised at the first, and not at all at the latter statement, for we can imagine young men enthusiastic enough to believe all the rubbish that is written and talked about woman's, and especially a young woman's, calling in life. We are perfectly certain, however, that one set of persons not taken into account apparently at all—viz., the parents of the male medical students—will have most decided objections to their sons' studies being pursued in close and tender companionship, at an age when the heart is impressionable, and the passions are but little under control. If the authorities of Queen's College like to start a female medical school, by all means let them do so; but we warn them that they will drive their male students elsewhere.

Our contemporary seems to imagine that lectures form the whole of the medical curriculum, and says:—

"If a teacher cannot lecture without the introduction of unnecessary nastiness, then he is unfit to teach; and we should have no hesitation in characterising a man who refused to address a mixed class on any subject in the whole realm of surgery or medicine as utterly unfit for his position. If male students declare that they could not sit in the same class-room with women to study medicine, we shall say they are prigs with whom their profession can very well dispense; and if women candidates for medical honours assert that they cannot be fellow-students with men, then we advise them to stay away, for they are quite unfit for the heavy plough on which they wish to lay their hands."

Now the practical work of medicine and surgery is to be learnt only by the manipulation of actual patients, and we wish to know whether the male patients of the Birmingham charities are prepared to have catheters passed, hydroceles tapped, or hernias manipulated by the hands of *female* students; for unless they are, those ladies cannot properly learn their work. We quite agree with the writer we have already quoted when he says—

"Female practitioners can never be of any use whatever to the public unless they go through exactly the same training, both mental and moral, as their male competitors; and, as in after life they can never practise any department of the profession isolated from men, it is absurd that they should start and spend the most important part of their professional existence apart from them."

All this is perfectly true, but so long as human nature is what it is, we do not believe decent men will willingly submit to surgical treatment at the hands of the opposite sex.

THE SULPHATES OF THE NEW CHINCHONA ALKALOIDS AS SUBSTITUTES FOR QUININE.

AN experimental inquiry was instituted in India in 1866 by the Indian Government relative to the substitution of the sulphates of quinidine, chinchonidine, and chinchonine for quinine, in the treatment of paroxysmal malarious fevers. We regret to learn, however, that these febrifuges have not been supplied from this country in adequate quantities to the medical services of the several Indian presidencies, and that in consequence the very satisfactory results of that inquiry have not yet been turned to any real practical account in India. It seems very desirable, in the interests of therapeutic knowledge and of State economy, that the well-founded belief in the febrifuge power of these alkaloid salts by the medical services in India should be recorded, and the testimony as to their efficiency furnished by the Chinchona Commissions appointed in Bengal, Madras, and Bombay should be more fully made known. The final report of the Madras Chinchona Commission especially, dated April 18th, 1868, printed in Parliamentary Blue-book No. 432, East India (Chinchona cultivation), embraces a large field of inquiry, and is based on data of unquestionable character. That report establishes that quinine and quinidine are equal in febrifuge action, that chinchonidine is only slightly less efficacious, and chinchonine, though considered somewhat inferior, is notwithstanding a valuable remedial agent in fever. These results are very conclusively shown in the subjoined tabular statement taken from the report in question:—

	No. of persons treated.	No. of cases in which less than 20 gr. checked the paroxysm.	No. of cases which required 20 gr. and upwards to check the paroxysm.	Percentage of cures effected with less than 20 gr.	Percentage of cures effected with 20 gr. and upwards.
Quinine, chemically pure .	416	320	96	76·92	23·07
Quinidine . . .	412	312	100	75·72	24·27
Chinchonidine .	323	242	81	74·92	25·07
Chinchonine . .	385	282	103	73·24	26·75

As regards the supply and cost of these new febrifuges, it is now ascertained that quinidine is not procurable in quantity sufficient to meet the requirements of the public service in India, but that chinchonidine and chinchonine are to be had abundantly, the former at 40s. and the latter at 30s. per lb., whereas the latest contract price of quinine is 98s. 8d. per lb.

It is thus evident that a large saving would accrue to Government by the utilisation of chinchonidine and chinchonine in the manner suggested, and that such saving would be much enhanced during the operations of war, when, from increased exposure of the troops to malarial influence, the demand for febrifuge agents would be greatly augmented. Farther, it would follow that by using these substitutes quinine would be materially lessened in price, and would consequently be brought into a greatly extended sphere of usefulness.

It only remains to add that this question would not be fairly disposed of by estimating its advantages on the ground of financial gain alone; for, assuredly, a liberal distribution of these comparatively cheap preparations of chinchona to the public services in India would confer immense benefits, by preventing and mitigating much physical suffering throughout the vast fever-stricken districts of that country. Strange to say, patent as the results of the experimental inquiry are, practical authoritative action in this important matter remains in abeyance.

UNIVERSITY COLLEGE.

THE distribution of prizes to the medical students of University College took place on Wednesday last, under the presidency of Lord Napier and Ettrick. The report read by the Dean (Mr. Marshall) gave a most satisfactory account of the well-doing of the Medical School and a very extended list of honours obtained by its students at the University of London. After the numerous medals and certificates of honour had been distributed to the successful competitors, Lord Napier delivered a short address, in which he expressed a hope that some of the gentlemen he saw before him intended to enter one of the public medical services, and directed attention to the wide sphere of usefulness open to those who took upon themselves military duties. He particularly referred to service in India as offering wide scope to the energies of medical men, since not merely military but most important civil appointments were open to members of the medical profession. Turning to civil life in this country, Lord Napier remarked how completely the relation of medicine to the public had changed of late. Instead of being merely a remedial agency, the medical profession had come to be the great guardians of public health, and the great sanitary reforms of past years had all been inaugurated by medical men. He regarded the recent division of the country into sanitary districts as of the greatest importance, and urged upon his hearers zeal and energy in any sanitary duties they might be called upon to undertake. The proceedings concluded with a vote of thanks to the chairman, proposed by W. D. Christie, Esq., C.B.

THE CONTROVERSY ON SEPTICÆMIA.

AFTER a long interruption, the French Academy of Medicine has again had the subject of septicæmia brought under its notice by Professor Vulpian, who has communicated the results of the numerous experiments he has undertaken in his laboratory, and which he thus summarises:—1. When rabbits or guinea-pigs are inoculated with the blood of a human being who has died of gangrene of the lung, and consequent septicæmia, they soon die, and their blood can prove, when injected into other animals, just as rapidly fatal. 2. To produce fatal results with blood which has been allowed to putrefy spontaneously and by exposure to the air, it is necessary to inject a considerable quantity, as much, in fact, as a cubic centimetre. The blood of the animal thus poisoned, however, acquires very virulent properties, and a much smaller quantity proves effective. 3. In certain cases the animals died at the expiration of several weeks, and the lesions consequent on purulent infection could then be demonstrated. 4. Blood taken from those affected with typhus fever never produced septicæmia in rabbits or guinea-pigs. 5. Well-marked differences in the characters of bacteria and vibrios are demonstrable in different instances, and Vulpian thinks these differences may possess an important influence on the activity of infection. 6. Vulpian regards true pathological septicæmia as distinct from that produced by experiment, and suggests the name bacteræmia for the latter.

MEDICAL AND SURGICAL FEES.

IT has been our duty from time to time to advocate for the medical practitioner, and especially the consultee, an increased remuneration for his advice and skill. Now, however, we have to direct attention to a somewhat different phase of the same question. There seems to be a decided tendency among the laity at the present day to pay the lowest possible premium for medical services, and every opportunity is taken to obtain gratuitous private advice. If a person, although in the receipt of a liberal salary, be even remotely connected with a medical institution, he almost claims it as a right for himself and family to be prescribed for or operated on free of charge. Nor are medical practitioners themselves always blameless in this matter. It is not at all uncommon to be consulted by some brother practitioner on the ailments of his friends or non-professional relatives, and even to be asked to operate gratuitously on patients who are well able to pay. Cases of this kind occur to the consultee every week, but such a state of things is unreasonable to the last degree. The consulting surgeon or physician cannot be expected to give free advice to everyone who may chance to have a friend or relative in the profession. The large amount of work done by medical men without payment both in hospital and private practice is proverbial, but the limit must be drawn somewhere, and we think that if gratuitous advice be given to the medical practitioner, his wife, and children, it is all that ought to be reasonably looked for. All this unremunerative labour is unnecessary and unjust, and the members of the profession cannot too strongly impress upon the public mind the fact that the workman is worthy of his hire, and must, indeed, receive it. The remedy is to a large extent in our own hands, and ought to be constantly adopted even at the risk of offending thoughtless friends.

DRAINAGE OF RICHMOND.

WE fear the ratepayers of Richmond are in process of acquiring experience which is not likely to render them very ardent admirers of sanitary reform. A third inquiry by the Local Government Board inspector, Mr. Harrison, C.E., with reference to the disposal of the town sewage, has just been held, a scheme having been propounded by Messrs. Gotto and Beesley, of which the vestry have marked their approval by giving a premium of 100 guineas to the authors of it, and asking the sanction of the Local Government Board to its adoption. The plan proposed is to deodorise the sewage by means of sulphate of alumina, charcoal, and lime, the solid matter being deposited and dried in furnaces, the effluent water passing into the Thames. Dr. Letheby gave it as his opinion that no nuisance would be caused by the works, and that the effluent water would be purified sufficiently to meet the requirements of the Thames Conservators. Owners of property in the neighbourhood took a different view, and opposed the scheme. Mr. Harrison sought to comfort both parties by pointing out that should

the scheme not answer, the works could be made available for trying some other plan. Possibly, but experiments in such matters are costly things. Anyhow, there is force in the inspector's reminder that "something should be done," as the time allowed the Richmond authorities for the diversion of their sewage from the river would expire in July next, after when they would be liable to a penalty of £50 for every day's default. Meanwhile no steps can be taken until the Local Government Board have received Mr. Harrison's report, and decided thereon.

THE PRESS AND HYGIENE.

MR. FROUDE acquitted himself with happy effect at the annual dinner of the Newspaper Press Fund on Saturday. Arguing that the press had in great measure superseded the pulpit as a social censor, he rather mal-adroitly took occasion to deal a side-blow at Ultramontanism as the arch enemy of all that liberty and enlightenment which it is the glory of the press to vindicate and diffuse. To keep the balance even, however, he added, "Of course all newspapers are infallible. It is lucky they are not all unanimous." His vein was clever and genial to the close, and his speech will be remembered as one of the best of the season. Its object, moreover, deserves and demands as much support as eloquence can procure for it. Journalism is a hard life, from the editor to the compositor. The mental strain involved in the incessant vigilance which the former must exercise, often at irregular hours, has its counterpart in the unhealthy conditions under which the product of his brain is put into type. As a rule, printing-offices in general, and newspaper ones in particular, are badly ventilated, their inmates work till far on into the night, and the transition from the heated atmosphere of their rooms to the morning air is trying to the strongest. Phthisis is exceptionally common among them, as is also wrist-drop, from the constant manipulation of the leaden types. While, therefore, the Newspaper Press Fund appeals in behalf of journalism in general, there is special room for such associations as the Printers' Pension Corporation, which provides for advanced age and bodily infirmity among its clients, and also supports an almshouse and an orphan asylum. At a recent anniversary of this institution, the Lord Mayor quoted some interesting statistics as to the success with which it met the many and multiform claims upon it, and urged its usefulness with an effect that told handsomely on the subscription-list. Printers are an increasing class, as are also those who live by contributing to the daily press, and both ought to be congratulated on having their cause so ably pleaded as in the recent addresses of the Lord Mayor and the first of living English historians.

THE ANTECEDENTS OF UREA IN THE ECONOMY.

IN a late number of the *Zeitschrift für Biologie* (1872), Dr. O. Schultzen and M. Nencki discuss the question of the secondary compounds which precede the formation of urea in the animal economy. It has long been known that albuminous substances, when acted on by acids and alkalies, or after undergoing digestion with the pancreatic juice, yield leucin, tyrosin, glycocol, &c. Dr. Schultzen and Nencki hold that these are the preliminary stages of urea. To determine this a small dog was reduced to the lowest amount of urea-excretion possible. On certain days some of the above substances were administered, and the amount of urea on the following days was estimated by the method of Bunsen. It was found that acetamid caused very slight increase in the amount of urea. Ten grammes of glycocol caused an increase of nine grammes of urea. According to calculation, 11·97 grammes should have been obtained. No notable quantity of nitrogen was eliminated by other means than by the urine. Leucin acted like glycocol. On the other hand, tyrosin caused no material increase, but tyrosin was found both in the urine and fæces. The authors conclude that the amido-acids form the urea. This, however, does not occur through a simple splitting, since in one molecule of urea there are two atoms of nitrogen, whilst in one atom of amido-acid there is only one atom of nitrogen. They believe that albuminous compounds split into amido-acids and nitrogen-free compounds. The amido-acids form the urea, the non-nitrogenous bodies undergo further oxidation into carbonic acid and water.

THE ADULTERATION ACT IN DUBLIN.

DR. CHARLES A. CAMERON, analyst for Dublin, lately presented his annual report to the Corporation of that city. During the past year he had analysed 496 specimens of food, chiefly milk, with the following results:—148 specimens of milk were adulterated with from 16 to 120 per cent. of water; 6 specimens of bread were examined, 1 only being adulterated with alum; 3 specimens of flour out of 8 were adulterated with alum and plaster-of-Paris; 2 specimens of coffee out of 3 were adulterated with chicory; of 2 samples of tea, 1 was adulterated with catechu, gum, and exhausted tea-leaves; 2 specimens of brandy proved to be corn-spirit of the worst quality, far below proof, and flavoured with fruit essences; some of the wines tested were also spurious; 20 specimens of confection were purchased, and all found to be pure; 14 specimens of pump-water were examined, of which 7 proved to be contaminated with animal matter; 2 samples of snuff and 1 of tobacco were analysed, 1 sample of snuff being adulterated with alkaline salts; 8 specimens of petroleum were tested, and none were found to give off inflammable vapours under 100° Fahr.; 332,961 lb. of meat were condemned as unfit for human food, the animals having suffered from pleuro-pneumonia, foot-and-mouth disease, and (the pig) scarlet fever. The report, which is rather meagre, ends with a list of names, addresses, offences, and date of conviction of persons convicted under the Adulteration Act.

DEATH UNDER CHLOROFORM.

THOMAS BRETON, aged sixty, the insane criminal who died under chloroform on the 15th inst. at Broadmoor, is another of the numerous instances in which death may follow the use of the anæsthetic, in spite of every precaution. On the 14th inst. he had fallen and injured his perineum, as a result of which blood issued from the urethra, while no urine was passed all the next night. The patient's resistance to the introduction of the catheter necessitated the administration of chloroform, which was accordingly done in a large well-ventilated room with Clover's apparatus, the bag containing at the time 11,000 cubic inches of air, of the proportion of 25 minims of chloroform to each 1000 cubic inches. At first nothing abnormal occurred; the patient became insensible; but on the introduction of the catheter he struggled so that the inhaler was again applied. Seven minutes thereafter the pulse flickered and stopped. Restorative efforts were immediately practised, but in vain. At the autopsy the right side of the heart was flaccid and full of fluid blood, the left side empty and contracted, while the arteries in the brain and throughout the body were atheromatous. Blood was found infiltrated into the cellular tissue of the perineum and scrotum. The verdict at the inquest was of course to the effect that death arose from chloroform, but that the

same was carefully and judiciously administered. During its administration Drs. Orange, Cassidy, and Buck were present.

HISTOLOGY OF THE RETINA OF THE HORSE.

IN a paper contained in the journal of the Turin Academy, of which an abstract appears in the *Centralblatt* for Feb. 1st, MM. Golgi and Manfredi state that if the fresh eye of a horse be macerated in dilute solutions of bichromate of potash or of chromic acid (containing 0·25—0·75 of the former, and 0·05—1·100 of the latter) the retina becomes detached from the swollen layer of rods and cones and outer granules, and breaks up with great regularity into three laminæ. The innermost of these is composed of the optic fibre layers, with here and there a ganglion cell adherent to it. The middle lamina is composed of grey substance containing a large number of ganglion cells, together with the adjoining part of the internal granule-layer. The third and outermost lamina is composed of the remainder of the internal granule-layer and the intergranule-layer. The first, or innermost layer contains, interspersed through its structure, numerous extremely branched connective-tissue cells, identical in appearance with those formerly described by Golgi as common in the central organs of the nervous system. These connective-tissue cells are frequent also in the second or middle lamina. The intergranule-layer of the third or outermost lamina consists chiefly of large cells of very irregular form, much flattened, transparent, and either homogeneous or very finely granular, with softened edges. They give off many processes which have, for some distance, the appearance of being mere prolongations of the cell body; but their extremities are highly refractile and homogeneous, and have varicosities that resemble those of the optic fibres. The processes anastomose freely with those of adjoining cells, forming a close felt with them. Besides these, there are other smaller and less branched cells in this layer.

THE EDINBURGH COLLEGE OF SURGEONS ON MR. HEADLAM'S BILL.

THIS College, in petitioning against this Bill, argues that the institution of three examining boards, according to the provisions of the Bill, would be not only unnecessary, but practically complicated and cumbersome, if not altogether unworkable, and, in addition, most expensive; that so to increase the expenses of examinations, as well as their severity, would probably be to deprive the country of a supply of practitioners adequate to the demand. The College thinks that if there must be legislation, which it regards as uncalled for, there should previously be deliberate inquiry by a Royal Commission or a Select Committee.

Differing entirely from the Edinburgh College as to the needlessness of legislation, we are not the less glad to quote its opinion as to the impracticableness of the proposals of the Bill of Mr. Headlam, and, by implication, of that of the Government of 1870, and in favour of inquiry by a Select Committee or a Commission.

MADAME ADELINA PATTI.

MADAME PATTI narrowly escaped a serious accident on the evening of Monday last, at the Royal Italian Opera. The performance was "Dinorah," in which at the close of the second act the heroine is supposed to cross a bridge which breaks down. In stage language, this part is "doubled," and the drop is made by a super disguised as *Dinorah*. A good deal of changing takes place, and Madame Patti, making room for others, leant against a screen, which gave way, and her right foot slipped through a small gap in the platform nearly up to the hip-joint. She fell backwards, and it was some seconds before she could be extricated. She was carried in a state of insensibility to her room, where she was seen by Mr. Lennox Browne, in professional attendance on the stage. Though somewhat severely bruised and shaken, Madame Patti had sustained no serious injury, and, with characteristic courage, as soon as she came to herself she dressed for the next act, and begged that the accident might pass unnoticed. She played her part to the close of the opera with her accustomed animation and effect, and none could have guessed that the fair *Dinorah's* recovery from her swoon after her rescue by *Hoel* had received so realistic an interpretation behind the scenes.

THE PHARMACEUTICAL SOCIETY.

THE Pharmaceutical Society of Great Britain and Ireland held its second annual dinner at the Crystal Palace on Tuesday. Nearly 300 gentlemen sat down. The chairman was Mr. A. F. Haselden, president of the Society. Among the toasts of the evening was that of the "Medical Profession," proposed by Mr. Brown of Manchester, and responded to at considerable length by Dr. Richard Quain; that of the "Pharmaceutical Conference," introduced by Mr. Betty, and acknowledged by Professor Attfield; and that of the "Stewards," proposed by Dr. F. W. Ramsay, and replied to by Mr. Carteighe. The occasion was a highly interesting one—the company including representatives of the Pharmaceutical Society from Scotland and Ireland, as well as the Midland Counties.

On the following evening the Society held its annual conversazione in the South Kensington Museum. The réunion which deservedly ranks as among the most attractive of the London season, was, in spite of unfavourable weather, very largely attended, the objects of interest in the various courts and galleries affording abundant occupation to the visitors, while the intervals of conversation were agreeably filled up by the performances of the band of the Grenadier Guards, under the direction of Mr. Dan. Godfrey. Madrigals and part-songs were also given in the Lecture Theatre by a glee company under the superintendence of Mr. Winn.

PROFESSOR SHARPEY.

WE have much pleasure in stating that Dr. Sharpey, who was operated on for cataract on the 10th inst., continues to progress most satisfactorily as far as the eyes are concerned. The corneal wound has healed, and the aqueous humour resecreted, so that the anterior chamber is now of normal depth, and the state of vision all that can be desired. The general health has, however, somewhat deteriorated under the enforced confinement of the illustrious patient, who has suffered from hepatic disturbance resulting in slight jaundice.

DISABILITIES OF THE LICENTIATES OF A COLLEGE OF PHYSICIANS.

ANOTHER licentiate of a College of Physicians—this time of the London College—has been nonsuited in a County Court on the ground that he was not an apothecary, and that the licence of the College does not give the right of recovering in cases where medicine is supplied. After our own strong opinion on this subject had been amply confirmed by the recent opinion of counsel in the case of a licentiate of the Edinburgh College of Physicians, it is tantalising to find county court judges using the Apothecaries Act of 1815 to override the Medical Act of 1858. Nothing can be more clear than that the latter Act intended to confer on all persons holding medical diplomas

the right of charging reasonably for medical attendance and for medicines supplied. The effect of such judgments as that described in a letter which we publish elsewhere is to perpetuate the old advantages of the Apothecaries' Society over the College of Physicians, and they will not be prevented until a judgment in the superior courts is obtained. The Colleges ought to urge their licentiates to take their cases further, and to defray the cost of the proceedings.

ATTEMPTED MURDER AT NETLEY.

A LAMENTABLE occurrence recently took place at Netley, by which an army surgeon ran a very narrow risk of losing his life. It appears that Surgeon Ray was engaged writing in one of the wards of the hospital, when an invalid private soldier of the 21st Regiment, under the influence, it is believed, of insanity, came behind him, and, seizing the unfortunate medical officer's head by the hair, attempted to cut his throat with a razor. Dr. Ray's life was probably saved by the top button of his patrol jacket, with which the edge of the razor first came in contact. The button was nearly severed; but it probably gave an upward direction to the razor's edge, so that the wound, more than four inches long, was inflicted upon the parts beneath the chin and above the hyoid bone. The cut penetrated deeply enough to open the floor of the mouth. The fingers of the officer's left hand are much injured. We are extremely glad to learn, however, that Dr. Ray is progressing very favourably; and we heartily congratulate him on his escape. He is under the care of Professor Longmore and Dr. Mackinnon; and the occurrence has naturally occasioned the expression of much sympathy and commiseration. The man who inflicted the injuries has been removed by the civil authorities.

A NEW SMALL-POX HOSPITAL.

THE Metropolitan Asylums Board have determined to build another small-pox hospital in the south-east district of London, and are looking out for a plot of land in the neighbourhood of Deptford and Camberwell. There is little doubt that, in coming to this resolution, they have exercised a wise discretion. Stockwell Hospital is at present the only establishment for the reception of cases of small-pox from Woolwich, Charlton, Blackheath, Plumstead, Greenwich, Deptford, New Cross, and all the other outlying south-east districts. And, too, as matters now obtain, most of the cases that arrive in the port of London find their way to this institution, because the authorities at the Seamen's Hospital decline to receive small-pox cases. It may, therefore, be considered that the opening of this hospital will prove a very great boon to the parishes south of the Thames.

THE WATER OF STAFFORD.

THE inhabitants of Stafford are getting alarmed, and not without reason, at the quality of the water supplied to the town. Several samples of the water were lately submitted for analysis to Dr. Hill of Birmingham, who reported on them as follows:—

"The samples taken from the town are very bad indeed, the majority of them being totally unfit, because dangerous, to use. A great many of them contain more nitrogen in the form of nitrates than is contained in average filtered London sewage. Such waters, if used, are calculated to disseminate zymotic diseases, and to impress upon all existing diseases a low type. They ought, therefore, to be abandoned at once."

In compliance with a requisition numerously signed, a meeting was convened by the Mayor a few days ago for the purpose of considering what steps should be taken to secure a purer supply of water, when a resolution was proposed and seconded having for its object the immediate erection of new water-works. To this course, however, there was a strong feeling of opposition manifested; and the meeting, which was a stormy and tumultuous one, broke up without arriving at any definite arrangement for a course of action.

UNQUALIFIED PRACTITIONERS.

MR. HUMPHREYS a few days ago held an inquest in Hoxton respecting the death of Emma Claridge, aged twenty-seven, wife of a pastrycook. She seems to have been attended by Mr. Westcott, the unqualified assistant of Dr. Rumble. After the delivery, Mr. Westcott brought medicine for the deceased, which he said might make her delirious. Another doctor was fetched, who found her pulseless and narcotised. She soon died. At a post-mortem examination the organs were found healthy. The jury returned a verdict in accordance with the medical evidence, adding that death was caused by a want of skill on the part of the person who attended her, who said in reply to the coroner that he was visiting assistant to Dr. Rumble. The case is another illustration of the folly and impropriety of medical men entrusting important duties to unqualified assistants.

THE ROYAL ACADEMY OF ARTS.

WE have much pleasure in announcing that Mr. John Marshall, F.R.S., has been elected Professor of Anatomy to the Royal Academy, in succession to the late Professor Partridge. Professor Marshall has long been known for the attention he has devoted to anatomical study in connexion with art, and his lectures at the Science and Art Department of the South Kensington Museum have for many years been popular with art-students. Being thus well acquainted with the anatomical requirements of artists, and being himself a facile draughtsman, we anticipate a popularity for the lectures of the new Professor at the Royal Academy even greater than that attained by his popular predecessors, Partridge and Green.

LEPROSY.

SOME few weeks since we drew attention to certain valuable additional investigations which Dr. Vandyke Carter had made touching the pathology and features of leprosy. In particularly noticing the excellence of many drawings of dissections and microscopic appearances which Dr. Carter allowed Mr. Wilson to exhibit at his lectures at the College of Surgeons, we expressed a hope that the India Office would at once publish Dr. Carter's text and drawings, since they constitute a really important addition to our still imperfect knowledge of leprosy. We regret to observe the appearance of some hesitation on the part of the India Office to carry out our suggestion, and trust that it is unfounded in fact.

MEDICAL PORTRAITS.

A VERY interesting exhibition of photographs is to be seen just now at the gallery of Messrs. Fradelle and Marshall, 230, Regent-street. The collection includes a large number of members of the House of Commons, and of medical, literary, dramatic, and artistic celebrities, and the likenesses are quite remarkable for their fidelity. Beyond this, the photo-mezzotint process by which they are produced gives us a broad artistic picture in place of the painfully hard-lined portrait which is the offspring of ordinary photography. If anything can compensate one for the horrors of sitting to the camera, it is surely such a result as the photo-mezzotint process produces. The gallery is well worth a visit.

THE CARMICHAEL PRIZES.

THESE prizes, of the value respectively of £200 and £100, have been awarded by the Council of the Irish College of Surgeons, or rather by three members of the Council, to Dr. Isaac Ashe (now of Derry) and to Dr. Dale. The subjects are—1. The Existing State of the Medical Profession; 2. Suggestions as to the Education of Medical Men; 3. The best method of Testing the Qualifications of Candidates by Licensing Bodies. The essayists have enjoyed the great advantage of discussing subjects of great present interest, and we shall be curious to see how far they have helped to elucidate them.

A MEMBER of the Court of Common Council has given notice of the following motion:—"That, in the opinion of this Court, it is desirable that steps should be taken to obtain power to inspect and sample tea and other articles of food and drink stored in the bonded warehouses, and, when such articles are found unfit for human consumption, to obtain an order from the justices for their condemnation; and that it be referred to the Commissioners of Sewers to endeavour to obtain such power."

THE Pope's illness is, as we have all along intimated, more serious than is officially given out. Cerebro-spinal exhaustion, the result of a life-long liability to epileptoid seizures, is manifest; while the paroxysms of coughing, due to subacute bronchitis, suffice of themselves to induce the congestion which brings on one of those seizures. Locomotor ataxy is also indicated; indeed the medical prognosis would be grave, even if his Holiness were not a much-tried octogenarian.

ON Tuesday night a numerously attended meeting was held at the Beaumont Hall, Mile-end, under the presidency of the Lord Mayor, for the purpose of furthering the effort now made to raise a sum of £100,000 for the erection of a new wing to the London Hospital. It was decided that a local committee should be immediately formed, and that the clergy and ministers of all denominations be earnestly invited to co-operate in the movement.

A DUEL was fought with cavalry pistols, in Algeria, a few weeks ago, between Dr. Maurin and a newspaper editor, when the former gentleman was severely wounded in the thigh. The ridiculous affair was characterised by even more than usual Gallic ostentation, both combatants advancing towards each other from a given distance like dancing masters, but thoroughly convinced that they displayed courage and *élan*.

ON Tuesday, at a special meeting of the managers of the Royal Edinburgh Asylum for the Insane, Dr. Thomas S. Clouston, of the Cumberland and Westmoreland Asylum, was elected by eleven votes as successor to Dr. Skae. He was also selected to supply the place of Dr. Skae as Morisonian lecturer for the current year.

THE statue of Dr. Livingstone, executed by Mrs. D. O. Hill, will be remodeled in bronze and unveiled in Edinburgh, to whose artistic attraction it will greatly add. A committee under the immediate patronage of the Princess Louise is already formed, and expects to have its object attained in time for the anticipated return of the explorer early in 1874.

IT is reported that a man died in Glasgow last week from the effects of a small dose of morphia administered by his wife with the view of allaying the excitement produced by drink. Where did the woman procure the morphia?

WE understand that Dr. Klein, of the Brown Institute, will give a series of fifteen lectures on General Histology at St. Bartholomew's Hospital, commencing in October next. They will doubtless prove of great value to the students, and constitute an important addition to the ordinary course of lectures on physiology.

LADY SMITH, widow of the late Sir James Edward Smith, sometime president of the Linnæan Society, celebrated her hundredth birthday at Lowestoft. At the dinner on the occasion, one hundred of the oldest inhabitants of the neighbourhood were entertained, their average ages amounting to eighty-seven years.

SIR WM. GULL was waited upon on Tuesday by Dr. Conneau and Dr. Baron Corvisart, who presented him, on the part of the Empress Eugénie, with a costly gold box bearing the Imperial cipher in diamonds. The box contained a pair of sleeve-links worn by the late Emperor.

DR. CORFIELD has reported to the vestry of St. George, Hanover-square, that out of fifteen samples of ground coffee which he had analysed only four were genuine, while of twenty samples of milk five only were pure. He proposed to send notice of the results of analyses to the sellers.

A TELEGRAM from Berlin reports the outbreak of cholera at East Posen, and that the Government had established a medical bureau near Thorn to arrest the introduction of cholera on the Vistula.

A *Gazette* of the Order of the Bath is about to be published, when we trust the claims of the members of both army and navy medical services will be found to have been duly recognised.

MR. FRANK BUCKLAND, writing to a contemporary on the subject of grouse disease, advises owners of grouse moors to put rock salt in localities frequented by the birds.

WE have authority for stating that Lady Mount Charles is progressing most favourably, and has for the last few days been able to leave her room.

THE milk and dairy man who was summoned on behalf of the Islington vestry for having sold adulterated milk on the 4th of April last has been fined £5 and costs.

THE authorities of Hanwell Asylum have increased the weekly charge for maintenance of pauper lunatics from 9*s*. 10½*d*. to 10*s*. 2½*d*.

THE Brighton guardians have decided, after a very warm discussion, to exclude beer in future from the workhouse dietary.

PROFESSOR OWEN has received from Her Majesty the Civil Companionship of the Bath.

ARMY MEDICAL SERVICE.

MR. CARDWELL having publicly declared his readiness to afford such explanations as might be required in reference to the new Medical Warrant, we thought it better, instead of simply reiterating the objections that have been urged against that document, to address ourselves to Dr. Lyon Playfair, M.P., as the representative of a university numbering so many medical graduates as that of Edinburgh, representing the dissatisfaction which prevailed, and urging that it was desirable, alike in the interests of the profession and the public service, that he should put some

questions to the War Minister with the view of eliciting some explanations, as it was impossible for any medical journalist to advise young men to enter that medical service so long as the present feeling of uncertainty prevailed. It says much for Dr. Lyon Playfair's energy that he had not been unmindful of the interests of the profession, but that he had already put himself in communication with the War Minister on this subject. We owe it to his courtesy that we are now in a position to publish the following information, upon which we for the present abstain from all comment.

Correspondence between the Right Hon. E. CARDWELL, *Secretary of War, and* Dr. LYON PLAYFAIR, M.P., *on the Medical Warrant.*

Dr. Lyon Playfair addressed to Mr. Cardwell a letter pointing out the hardships which the new Warrant inflicted. In answer to this, Mr. Cardwell sent the following Memorandum:—

1. *Withdrawal of the rate of* 17*s.* 6*d. a day after fifteen years' service in the junior rank.*—It has been decided that the establishment of senior officers shall not so largely depend as hitherto upon the number of regiments and brigades in the service, but that it shall be annually so constituted as to secure, on an average, promotion after fifteen years to the juniors. The result of this arrangement will be that many officers will receive their promotion, and 17*s.* 6*d.* a day, after less than fifteen years' service; and on completion of fifteen years they will receive 20*s.* a day. There may be a very few men each year who will wait a few weeks on the rate of 15*s.* a day, but they will receive 20*s.* a day immediately upon their promotion, which will take place only a short time after completing fifteen years' service.

2. *Forage allowance.*—An alteration has been made in the rules for the issue of forage, but only in the direction which is contemplated for all departmental officers serving with the army. This was more especially needed in the Medical Department, as the number of officers of senior rank was being so largely increased without reference to the duties they were called upon to perform. I may add that the medical officers are not placed in an exceptionally disadvantageous position in this respect, as compared with other departments. Moreover, it is not necessary that an officer should be the possessor of a horse, but that he should make arrangements to have one always available.

3. *Promotion by selection.*—The promotion will not be *chiefly* by selection; the rule which applies to promotion in the so-termed seniority corps—the Artillery and Engineers—will apply to the medical department. This rule is not intended to make any large change in the mode of promotion, but is designed to attach just so much of uncertainty to the principle of promotion as to prevent the growth of a system of bonus-giving to induce officers to retire. The exceptions to the seniority principle are sure to be very rare.

4. *Removal of regimental surgeons from their regiments.*—The only means by which the improvement in the position of the medical service could have been secured was the removal of the officers from the regimental establishment as explained in the note on the first point. This has been done in a manner which will cause the least difficulty to them, and has relieved those medical officers who may be serving with but not specially attached to regiments under the terms of the Warrant, from all contributions to bands in future. The mode adopted was that in which all reductions of establishment are effected.

5. *Medical officers junior to their rank.*—Before the Medical Warrant was issued her Majesty signed the Warrant regulating the tenure of rank of field officer in a regiment. This period is fixed at five years, with power of reappointment. The position, therefore, of the medical officers is much the same as that of the regimental field officer, with, if anything, an advantage to the medical officer.

6 *Increase of establishment and the promotion of surgeon.*—The *Gazette* promoting a large number of surgeons to be surgeons-major was issued on Tuesday evening. This, of course, confers the greatest advantages upon those officers who are promoted, and they are those who will complete fifteen years' service before 1st October next. But the large increase of the establishment of the senior rank gives to those officers who are below the line which is drawn a much improved chance of promotion, even before completing fifteen years' service. These promotions have been submitted to her Majesty in fulfilment of the statement which Mr. Cardwell made in bringing in the estimates, "That a surgeon should be enabled to look confidently forward to becoming a surgeon-major after fifteen years' service." In an arrangement of this kind it is impossible to give the same advantages to all, but there is no junior officer who does not reap considerable benefit.

THE CRYSTAL PALACE.

AGE and custom do not seem to wither or stale the variety of inducements offered to the public to visit this popular resort. The efforts which are constantly being made by the directors to render the building attractive to the scientific as well as to the general public are worthy of every praise. Art and science contribute numerous objects worthy the attention and investigation of their votaries. The legitimate drama, almost moribund, and driven by an unsympathetic public from the London stage, has made a stout stand there for fresh vitality, and, it is to be hoped, that a revulsion of feeling will ensue on the matter of dramatic entertainments. The aquarium now contains many and remarkable specimens of marine animals, among which we may mention a late addition—viz., the sea-horse, which, curiously enough, is called in the programme the hippocampus. Sketches in oil of scenes in Khiva and Central Asia must possess considerable interest for most reading people just at this time. The Australasian collection comprises many interesting objects in natural history. In the Roman vestibule the visitor is enabled to form an estimate of the beauty and grandeur of ancient Pompeii, that city of sybarites, when in the flush of her pride, and he will also see her as she is now, graced even in desolation and ruin. In the Thibet collection, the anatomist may see a most unique osteological specimen, which is nothing less than a trumpet made out of a human femur. It would be interesting to know whether any disease of the bone, such as myeloid tumour, would in any appreciable degree modify the "trumpet tone." In the same collection may be seen a long thick piece of leather with a wooden handle, which is in Thibet the instrument for administering gentle correction to native ladies who are so oblivious of the rigid tenets of etiquette which prevail in that country as to appear unveiled in the public streets. There is artistic workmanship both in the conception and construction of this instrument, which puts to shame the crude and barbaric stick of thumb-thickness which the English law sanctioned in former times for the castigation of scolds and gads-about. By the way, we never remember to have read that the cold-water cure by means of the "cucking" or ducking stool was applied in the treatment of refractory females in any other country than ours. We wish all possible success to Mr. Tom Taylor's endeavour to reawaken public interest in the Shakesperian drama. He has begun promisingly with "Hamlet," which is, on the whole, exceedingly well put upon the stage. Mr. J. Steele MacKaye's impersonation of the chief character we by no means think perfect, but when viewed as a whole its merits far transcend its defects, and if this gentleman will follow the kindly, because discriminating, criticism as appeared in a late number of the *Spectator*, he has the possibilities of a great future before him.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD.—His Royal Highness the Duke of Edinburgh presided over the annual festival of this charity, which was held on Monday at the City Terminus Hotel, Cannon-street. The report showed that during the past year nearly 5000 patients were treated at the hospital. In the course of the evening contributions to the amount of £2000 were announced, half of this sum being an anonymous donation. His Royal Highness has consented to allow his name to be placed on the list of vice-presidents of the hospital.

Correspondence.

"Audi alteram partem."

DELIRIUM TREMENS AFTER CHLORAL DRINKING.

To the Editor of THE LANCET.

SIR,—The interest attaching to the physiological effects of the hydrate of chloral is, I think, sufficient justification for my asking you to publish the following case.

Mr. A——, aged thirty-five, consulted me in September last, saying that he suffered from weakness, muscular pains, loss of appetite, and constipation. He had a white, thickly-furred tongue, and very offensive breath. His general condition improved somewhat after taking a mixture containing nitro-hydrochloric acid, quinine, and taraxacum; but he still complained much of pain in the upper extremities.

Oct. 28th.—I received a hurried message to say he seemed very ill, and "could not be roused." On arriving at his house, in the space of twenty minutes, I found him able to answer questions, but he clipped his words like a man who had been drinking, and when left quiet for a moment or two his eyelids drooped. The pupils seemed slightly dilated; pulse 65; temperature normal; urine pale and very copious, without either sugar or albumen, sp. gr. 1010. He is in the habit of drinking large quantities of soda-water daily.

29th.—In much the same condition, but more wakeful; does not recollect my visit yesterday.

30th.—Having suspected that his usual medical attendant and myself attributed his state to the action of some drug, he confessed to-day that for some months he had taken chloral in large quantities. He agreed to make an effort to stop it, and was limited to a draught containing one drachm at bedtime; with the understanding that this quantity was to be gradually reduced. An effervescing mixture containing quinine and iron was ordered during the day.

Nov. 2nd.—Although his appetite has much improved and he feels stronger, he has not slept for three nights. He says he does not feel nervous, but he talks rapidly, and has been perspiring this afternoon. There is decided muscular tremor. He begged that the chloral might be stopped, as one drachm did not suffice to procure sleep, and always brought on the pains. He was ordered a mixture containing bromide of potassium, sedative solution of opium, and aromatic spirit of ammonia; and to have a small glass of brandy-and-water at bedtime in lieu of the chloral draught.

3rd.—Slept for about two hours after taking the brandy last night; talked incoherently, however, on waking up, and has not been collected since. He now presents all the phenomena of delirium tremens.

Remarks.—The attack was prolonged and severe, and at one time he seemed almost sinking. The question of treatment presented some difficulties, with chloral inadmissible, and opium, for reasons to be explained, uncertain in its effects. Some may perhaps say that expectancy and feeding would have been sufficient, but his extreme restlessness and steadily failing pulse made me doubt this. I finally determined to give him tartar emetic and opium, as proposed by Graves, and had the satisfaction of finding considerable improvement in his condition the same evening; this was followed by a good night's rest and speedy convalescence. This patient, according to his own confession, commenced taking opium when about seventeen years of age, his daily allowance before beginning chloral averaging about fifteen grains per diem. Some months before consulting me he wished to break off the habit of opium-eating, and thought he could do so by substituting chloral in its place. His consumption of the latter drug averaged, for about five weeks before I saw him, according to his own statement, at least two hundred grains in the twenty-four hours. During the time he took opium he was known to be active in his business, intelligent, and fond of reading; but the change to chloral made him quite the reverse, and was altogether injurious. He seldom touched alcoholic stimulants in any shape. The chief symptoms, then, after this prolonged and excessive use of chloral, were—inaptitude for exertion, muscular pains chiefly felt in the upper extremities, loss of appetite, great thirst, constantly fetid breath, and constipation. I did not notice any eruption about the finger-nails such as I have seen spoken of. The occurrence of delirium tremens in this case is noteworthy, as it is nowadays sometimes stated in books that a like effect from the sudden withdrawal of alcohol is even more than problematical. Although no one would let the fear of delirium tremens weigh with him in persuading a patient to give up the vice of drinking, it is, as a matter of fact, not accurate to say that the sudden withdrawal of alcohol never induces the disease. Here we had the same effect following the discontinuance of chloral; and there was no appreciable difference between the disease as seen in this case and in one where alcohol has been the predisposing agent.

Your obedient servant,

GEO. F. ELLIOTT,
Physician to the Hull Infirmary.

May, 1873.

ON CHANGE OF COLOUR IN HAIR.

To the Editor of THE LANCET.

SIR,—The presence in your last issue (May 10th) of a short article on the sudden change of colour in the human hair consequent on severe mental impressions, the *rationale* of operation being far from elucidation, leads me to offer the following remarks, mainly on the seasonal colour-change in certain species of hare, in the hope that the details of the process as seen among animals, normally occurring, may give a few hints in the furtherance of inquiry into the abnormally and exceptionally occurring change in the human species to which you refer.

In the North American hare (L. Americanus) the reddish-brown summer coat becomes completely merged in white on the advent of winter. The long outer hairs of the fur only undergo the change, the soft short under fur (anatomically similar to the outer hairs) retaining the colouring throughout. The shaft of the hair, made up of strings of cells running from tip to base, in becoming white, shows no gradual and regular involvement starting from a given point—e.g., the base; but, on the contrary, great irregularity prevails, as individual hairs from the same animal may be obtained some with the base only white, others with the upper third changed, others again with the base and tip unchanged, the middle third being completely white. Under the microscope the changed portions show the cells colourless, and in a changing portion some rows are more advanced than others, and even individual cells in the same row illustrate the same feature, clearly exemplifying an individuality of action on the part of the component cells in the colour-change production. On the other hand, also, some few of the hairs retain their colour, while the whiskers and eyelashes, which in anatomical features closely approach the human hair, exemplify the irregularity of action above detailed.

In the hill hare of Scotland (L. variabilis) the process of change is identical with the American hare. In the Irish hare (L. Hibernicus) a partial change ensues, causing a brindling and mottling of the fur, but in the hairs undergoing the change the same features of operation are repeated.

Now, in these examples, the absence of change in the under fur, the incompleteness in the outer fur, some hairs not undergoing the change, and the zonular character of the change in the shaft following no definite rule, clearly indicate a process guided by the hair elements independent of a general agency in the economy at large; and the cell phases, as revealed by the microscope, no less illustrate an individual freedom of action. Hence we must regard the hair as having a life of its own, and each of its component cells as vital atoms capable of initiating change in themselves. The changed cells being devoid of pigment must be referred either to an abstraction of the original pigment particles or a chemical alteration resulting in bleaching. It is clear that this change in the animal is associated with augmented nutritive agency, as the hairs at the same time increase in length and thickness by extra cell-production; it is gradual, and spread over some three weeks.

In the human subject, the increasing spread of mottling and ultimate whiteness of the head in connexion with age no less originates in individual hairs, and often shows a decided temporary limitation of the change to portions of the shaft, with no regularity of involvement. Here the process would also appear to be connected with nutrition, but in diminished force as compared with the animal subject. We

have instances of white hairs occurring in the regrowth over a patch destroyed by parasitic disease, and the crop of hair which follows shaving of the whiskers and the beard in middle and advancing age is not uncommonly much lighter in hue than the original, and even occasionally merges on white. These point to individual vitality of each hair, and connect the change with the nutritive function. The non-implication of the integument in the examples of sudden whiteness from emotional causes also centres the action in the hair textures—the cell elements,—while the suddenness of the change and its universality connect it with a general agency. Can the process be similar to that gradually occurring in man and animals, but suddenly induced in the instances in question through the medium of the nervous system? Also in the illustrating examples, was the change originated by the intensity of the emotions, or, on the other hand, was it merely the hastening of a process naturally commencing? Careful inquiry into any future instance, and accurate examination of the details, would tend to throw light on this subject, obscure at least as far as the human species is concerned.

I am, Sir, your obedient servant,

FRANCIS H. WELCH, F.R.C.S.E.

Royal Victoria Hospital, Netley, May 13th, 1873.

INSURANCE OF MEDICAL MEN AGAINST SICKNESS.

To the Editor of THE LANCET.

SIR,—I observed a letter in THE LANCET of last week proposing the establishment of a sick benefit society for medical men, which, for a certain annual payment, would guarantee a weekly allowance when illness or accident should incapacitate from professional labour. On many occasions, both in medical and other papers, I have endeavoured to direct attention to the vast amount of good that would necessarily result from the formation of such a club for professional men and others of a similar class who are dependent for support on their own exertions, and who are compelled by circumstances to live just as much from hand to mouth as any mechanic, and to whom therefore sickness, if long continued, means absolute ruin; and their case is really much more pitiable than the so-called working man, for, with larger expenses and keener susceptibilities, they have to struggle not only against poverty, but against the appearance of it, as their position, and consequently their livelihood, depends to a great extent on externals. Your correspondent mentioned some sad cases of professional want which have been lately brought before us, and I think all your readers will agree that it is better with prudent foresight to ensure against a day of necessity than to be reduced to appeal to the charity of our brethren.

Most medical men are acquainted with benefit societies, like the Hearts of Oak, United Patriots, &c., with their tens of thousands of members, chiefly, of course, labourers and mechanics. The weekly grant during sickness is 18s., with other corresponding allowances; the annual payment to the club is about £2. If these are so successful, I can see no just reason why a club of a higher class should not flourish taking a nearly equal scale, which would be as follows for members under thirty-five years:—

Entrance Fees.	Yearly payments.	During sickness not exceeding 6 months per week.	Over that time superannuation allowance.
£0 10s. 0d. ...	£4 10s. 0d. ...	to receive £2 ...	£0 15s. 0d.
£1 0s. 0d. ...	£9 0s. 0d. ...	,, £4 ...	£1 10s. 0d.
£1 10s. 0d.	£13 10s. 0d. ...	,, £6 ...	£2 5s. 0d.
£2 0s. 0d.	£18 0s. 0d. ...	,, £8 ...	£3 0s. 0d.

with a corresponding scale of increase of payment according to age.

If the Hearts of Oak and other clubs are not only self-supporting, but also increasing their capital yearly, it is certain that a higher class society (whether medical only, or more extended in its operation) must succeed under proper management. All that is required is a commencement by some of the influential members of our profession, and I do trust that you, Sir, will give your powerful aid to such an undertaking.—I am, Sir, yours &c.,

May 20th, 1873. WM. AKERMAN, L.K.Q.C.P., M.R.C.S.

"FEES FOR MEDICAL EVIDENCE."

To the Editor of THE LANCET.

SIR,—I see in your impression of Saturday last a report of a case in which Dr. Clarke, of Blackhill, refused to give evidence unless he received a reasonable fee. Such cases are becoming too frequent, and I think something should be done to put an end to such loss of time and money unnecessarily incurred by medical men.

At the last Liverpool Assizes I was subpœnaed as a witness in the Court of Passage. I attended daily from 10 A.M. till 5 P.M., scarcely having time for necessary refreshment. To every inquiry I made I was told "The cases are short; yours is coming on next." On the *seventh* day the case did come on. I informed Mr. Attorney-General Pickering on going into the witness-box that I had received no fee, and refused to give evidence until I was paid for attendance, when I was coolly told by the plaintiff's counsel, "Doctor, we won't require your evidence." Such is the plain, unvarnished tale, and surely no comment is required to explain the intolerable nuisance such a course of procedure is to a medical man.

Inasmuch as a medical man is obliged to attend under a penalty of £100, surely in these days of "reform," some arrangement could be made by which he would be guaranteed the moderate allowance of at least a guinea a day. I think medical men are altogether to blame in this matter. We have now-a-days so many medical charities, and so much indiscriminate *gratuitous* medical advice, that a great number of the public look upon it as part of a medical man's *duty* to attend any case, whether he receives pay or not.

I am, Sir, yours faithfully,

J. WILSON STEELE, M.D.

Workhouse Hospital, Liverpool, May 19th, 1873.

DISABILITIES OF LICENTIATES OF COLLEGES OF PHYSICIANS.

To the Editor of THE LANCET.

SIR,—I have been compelled, though most unwillingly, to sue in the County Court here in Sheffield for some *fees* due to me, the cost of medicines supplied to my own patients, and have been, much to my surprise, nonsuited by the judge, on the ground that I am not an apothecary, but L.R.C.P. Lond. The latter title the judge holds does not give the right to anyone to so recover, although at the time I pointed out to that magnate the decision of the late Lord Chancellor, related at length in the *Jurist* of June 1st, 1861, when the Apothecaries' Hall brought their action against the College of Physicians, and which decision was entirely in favour of the College. And now, Sir, will you kindly let me know through the journal your opinion of the matter, as I feel the case to be serious to myself, and possibly so to all other licentiates who may be compelled to do as I have done.

I have written to the College of Physicians.

I remain, Sir, yours sincerely,

E. SKINNER, M.R.C.S. Eng., L.R.C.P. Lond.

Sheffield, May 16th, 1873.

PHONOMETRY.

To the Editor of THE LANCET.

SIR,—In THE LANCET of May 10th, under the head of "Foreign Gleanings," you draw attention to Guttmann's criticisms on "a new method of investigation which Dr. Baas had described by the name of phonometry in the *Deutsches Archiv. für Klin. Med.*, 1872, Bd. xi." In THE LANCET of Dec. 16th, 1871, a paper of mine is inserted entitled "The Application of the Diapason to Clinical Auscultation." On comparing my paper with the abstract above alluded to, I find many of my own words repeated. These facts speak for themselves. In the face of my paper, does Dr. Baas claim to be the originator of this "new method of investigation"?

Your obedient servant,

W. HANDSEL GRIFFITHS.

Hume-street, Dublin, May 13th, 1873.

CORONER'S INQUESTS AT BURY ST. EDMUNDS.

To the Editor of THE LANCET.

SIR,—My attention has been called to a paragraph in a local paper, extracted from THE LANCET, reflecting upon a handbill supposed to have been issued by the Coroner of Bury St. Edmunds. I beg to inform you that I am and have been for many years coroner of that borough, and assuredly I have issued no handbill or given any instructions whatever. I consider it to be the duty of the coroner to decide upon the necessity of holding inquests.

I am, Sir, yours obediently,

JAMES SPARKE,
Coroner of the Borough of Bury St. Edmunds.

Under Sheriff's Office, Bury St. Edmunds,
May 16th, 1873.

PARLIAMENTARY INTELLIGENCE.

In the House of Commons on Wednesday, the debate on the Contagious Diseases Acts occupied the whole of the sitting.

Mr. W. FOWLER, in moving the second reading of a Bill for repealing the Acts of 1866 and 1869, devoted the main part of a long speech to an elaborate confutation of the statistics on which the supporters of the Acts relied—particularly the Devonport statistics—maintaining that they were false and untrustworthy. He dwelt, too, on the sentimental arguments founded on the degradation and contamination to which the objects of the Acts were exposed, and the inexpediency of legislating for this particular sin as if it were inevitable and irrepressible. As to the moral effects of the Acts, he denied that they brought about reformations; but, if that were so, it was by accident only, for health, not virtue, was the original design of the Acts. Also he threw doubt on the physical results of the Acts—at least, the improvements which had been noticed would have happened without these Acts, and might be produced by voluntary action. If this legislation was good, it ought to be extended to the whole country. But the system of supervision had utterly failed in foreign countries, and he denounced it as immoral, illusory, cruel, and unnecessary.

Sir J. PAKINGTON, in moving the rejection of the Bill, complained that the Government had not taken the duty into their own hands, as these Acts had originally been passed on the responsibility of the Executive Government. Sir John traced the history of this legislation from 1864, when it originated at a meeting of Ministers and ex-Ministers connected with the Naval and Military Departments, and, admitting that morality was not its original intention, he maintained, from the reports of the three Parliamentary inquiries, that its moral results had been most important. Its sanitary advantages he held to be proved beyond all doubt. The improvements the Acts had effected at Aldershott and the Curragh, and the diminution in juvenile crime, of themselves justified the Acts, and Sir John did not scruple to avow his readiness to see them extended gradually to the whole of the country.

Mr. J. D. LEWIS seconded the amendment in a forcible speech, vindicating the working of the Acts from his experience of Devonport, where, he asserted, they were thoroughly approved. Strongly condemning the "infamous and malignant" representations which had been circulated, he explained the safeguards against abuse established by the Acts, and predicted that the agitation would soon die out.

Similar arguments were urged by Colonel EGERTON LEIGH and Sir JOHN TRELAWNY against the Bill; while Mr. MUNDELLA and Mr. COWPER-TEMPLE argued in its favour.

Mr. HENLEY spoke warmly against connivance with sin, and declared that even if any sanitary gain could be shown, which he denied, it would not alter his opinion.

Mr. BRUCE vindicated the accuracy of the statistics, and, though he admitted the impossibility of extending the Acts to the rest of the country, he was so convinced of their beneficial results that he could not consent to their repeal.

On a division, the second reading was negatived by 251 to 128.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND. — The following gentlemen, having passed the required examinations for the diploma, have been admitted Members of the College during the week:—

Atthill, William E. B., Upper Gloster-place.
Baker, John H., Hockley.
Bedford, Robt., L.R.C.P. Lond., Pentonville-road.
Belvin, James W., M.D. New York.
Black, Robert P., Trinidad, West Indies.
Carter, Francis R., Leeds.
Charlesworth, Henry, L.S.A., Longnor, near Buxton.
Cookson, Hugh A., L.S.A., Stowmarket, Suffolk.
Crocker, Henry E., Brighton.
Delamotte, Peter W., L.S.A., Swanage, Dorset.
Dodson, Andrew, Sheinton.
Dyson, William, Sheffield.
East, George E., Hounslow, Middlesex.
Field, Ernest, Croydon, Surrey.
Flint, Edward, M.B. Edin., Canterbury.
Foster, Reginald H., L.S.A., Brighton.
Garrett, Charles F., Newport, Monmouthshire.
Garstang, Edward M., Bolton.
Gillilie, Alfred A., L.R.C.P. Edin., Shrewsbury.
Gilmour, John H., L.S.A., Hurstbourne Tarrant.
Hamilton, Francis G., Clapton, Middlesex.
Heale, Alfred L., Luton, Bedfordshire.
Highton, Thomas, Leicester.
Hutchinson, Charles F., M.B. Edin., Duke-street.
Hynes, Alfred M., L.R.C.P. Edin., Manchester.
Jones, Percy O., Gloucester.
Kessen, Andrew E., L.S.A., Brixton, Surrey.
Lupton, Harry, Thame, Oxfordshire.
Maddison, William P., London.
Mainwaring, John G., Stratford-le-Bow.
Murphy, Robert W., L.R.C.P. Edin., Hobart Town.
Owen, William, Carnarvon.
Prothero, David G., L.S.A., Llandilo, South Wales.
Robinson, James, Egerton, near Bolton.
Smith, Frank J. S., L.S.A., Warwick-gardens.
Stevenson, William E., Addlestone, Surrey.
Stuart, John B., Wigan.
Tayler, Herbert P., L.S.A., Lewisham-road.
Todd, William H., L.R.C.P. Edin., Whitechapel.
Tomes, Arthur, Redditch, Worcestershire.
Wayler, George S. A., Devizes, Wilts.
Whitehead, George M., Preston, Lancashire.
Willcocks, Alexander J., East Farleigh, Kent.
Wilkins, Ernest W. S., Newport, Isle of Wight.
Williams, William A., Chester.

The following gentlemen passed the primary examination in Anatomy and Physiology on the 15th inst.:—

H. B. Brigg, King's College; W. T. Davey, A. Hewett, T. F. Hopcraft, C. H. Lowe, G. R. Parker, H. Payne, and G. F. H. Rule, St. Bartholomew's Hospital; C. T. Alexander, J. T. Knight, T. H. Palmer, and H. C. Strover, Guy's Hospital; A. Wright and E. J. Henderson, St. Mary's Hospital; E. A. Hardwick, Charing-cross Hospital; R. Howard, Manchester; W. White, Leeds; A. L. Tate and F. Pershouse, St. George's Hospital; H. W. Phillips and J. A. M. Moullin, St. Thomas's Hospital.

Of the 107 candidates examined on the 13th, 14th, and 15th inst., 37 failed to satisfy the Court of Examiners, and were referred to their anatomical and physiological studies for three months. The total number of candidates admitted to the primary examinations for the Membership during the last and present month were 443, of which 104 were rejected.

APOTHECARIES' HALL. — The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on May 15th:—

Williams, Trevor Wm. Wynn, Montague-square.

As Assistants in Compounding and Dispensing Medicines:—

Armitage, J. S., Kentish-town.
Clifford, T. A., Bayswater.
Mager, W. K., Westmeon.

Medical Appointments.

BARRY, J. W., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of Health for the Urban Sanitary District of Ramsgate.

BLACK, J. G., M.D., M.B., M.R.C.S.E., has been appointed an Hon. Physician to the Newcastle-on-Tyne Dispensary.

BLICK, T. E., M.R.C.S.E., has been appointed Medical Officer for the Islip District of the Bicester Union, vice Smith, resigned.

BOTHWELL, G. G., L.R.C.P.Ed., M.R.C.S.E., L.M., has been appointed Medical Officer to the Worcester Amalgamated Friendly Societies' Medical Association, vice Blyth, resigned.

BURRETON, W. W., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Oughterard Dispensary District of the Oughterard Union, Co. Galway, vice Mayne, resigned.

CARMICHAEL, J., M.D., has been appointed Medical Officer and Public Vaccinator for Burntisland, Fifeshire, vice Williamson, deceased.

CARR, Dr. W., has been appointed Resident Medical Assistant to the Royal Infirmary, Dundee, vice Campbell.

DEVANY, P. C., L.R.C.P.Ed., L.R.C.S.I., L.A.H.Dub., has been appointed Apothecary to the Sligo Dispensary, Sligo Union, vice O'Reilly, resigned.

EVANS, A. G., M.R.C.S.E., has been appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator for the Towcester District of the Towcester Union, vice Haygate, resigned.

FAIRBANK, Mr. F. C., has been elected Medical Officer of Health for Doncaster: £150 per annum.

FARRAR, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Surgeon to the Bradford (Yorkshire) Medical Aid Association of Friendly Societies, vice Butterfield.

GAMGEE, A., M.D., M.R.C.P.Ed., F.R.S.Ed., has been appointed Brackenbury Professor of Practical Physiology and Histology in Owens College, Manchester.

HEALY, J., L.R.C.P.Ed., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Emlagh Dispensary District of the Cahercivveen Union, vice Donovan.

HIGGINS, C., F.R.C.S.E., has been appointed Assistant Ophthalmic Surgeon to Guy's Hospital.

HOUSTON, J. K., M.D., has been elected Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Aboghill Dispensary District of the Ballymena Union, vice Chestnutt, resigned.

LEE, R. J., M.D., has been appointed Assistant Obstetric Physician and Lecturer on Midwifery and the Diseases of Women at St. George's Hospital.

LEWIS, W., M.B., C.M., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Parochial Board of Erskine, Renfrewshire, and Medical Officer of Health for the District, vice J. S. Cumming, M.D., resigned.

LYLE, R., M.D., has been appointed an Hon. Physician to the Newcastle-on-Tyne Dispensary.

MACPHERSON, C., M.B., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for Westray and Papa Westray, Orkney, vice Eustace, resigned.

MORGANS, J., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Huntingdon District of the Kington Union, vice James, resigned.

ORCHARD, J. S., M.B., C.M., has been appointed Junior House-Surgeon to the Sunderland Infirmary, vice Brady, resigned.

POGSON, W., M.R.C.S.E., L.R.C.P.Ed., has been appointed Public Vaccinator for the Scacroft District of the Leeds Union.

ROSS, J., M.D., L.R.C.S.Ed., has been appointed Parochial Medical Officer and Public Vaccinator for Alves, Co. Elgin, vice Robb, deceased.

SCOTLAND, Dr. —, has been appointed an Hon. Physician to the Newcastle-on-Tyne Dispensary.

SCRAGGS, M. R., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer to the Union Workhouse, Clogher, Co. Tyrone, vice Twigg, resigned.

SHAW, J. E., M.B., C.M., has been appointed Junior House-Surgeon to the Preston and County of Lancaster Royal Infirmary, vice Edwards, deceased.

SMITH, R., L.R.C.P.Ed., F.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Heckfield District of the Hartley Wintney Union, vice Haslam, resigned.

STAUNTON, E. P., L.A.H.Dub., has been appointed Apothecary to the Galway Dispensary and the Workhouse of the Galway Union, vice England, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ANDREWS.—On the 16th inst., at Camden-road, the wife of Jas. Andrews, M.D., of a daughter.

COGAN.—On the 15th inst., at Northampton, the wife of Leo F. Cogan, M.R.C.S.E., of a daughter.

ELLERY.—On the 18th inst., at the Shrubbery, Axminster, Devon, the wife of H. J. Ellery, M.D., of a son.

MIDDLEMIST.—On the 18th inst., at Bedford-place, Russell-square, the wife of R. P. Middlemist, L.R.C.P.L., M.R.C.S.E., of a daughter.

NEWCOMBE.—On the 8th inst., at Walker-terrace, Gateshead, the wife of F. W. Newcombe, M.D., of a daughter.

THOMSON.—On the 18th inst., at Campbell House, Higham Ferrers, Northamptonshire, the wife of D. Thomson, M.D., of a son.

MARRIAGES.

BATEMAN—DANCE.—On the 14th inst., at St. Mary's, Reading, Francis Bateman, M.B., to Julia, only surviving daughter of the late Benjamin Dance, Esq., of Pimlico.—No Cards.

BENHAM—ADNAMS.—On the 21st inst., at the Congregational Church, Wanstead, Henry James, eldest son of Mr. James Benham, of Wigmore-street, W., to Eleanor Ann, eldest daughter of Mr. George Adnams, of Witham, Essex.

BODINGTON—BELL.—On the 5th inst., at South-place Chapel, Finsbury, G. F. Bodington, M.D., M.R.C.P., F.R.C.S., of Ashwood House, Kingswinford, Staffordshire, to Mrs. Bell, eldest daughter of F. C. Brooke, Esq., of Ufford, Suffolk, and granddaughter of the late Charles Allix, Esq., of Willoughby, Lincolnshire.

DEATHS.

CAMPBELL.—On the 14th inst., J. Campbell, M.D., of Largs, aged 81.

DAVIES.—On the 10th inst., R. Davies, Surgeon, of Llanfyllin, aged 72.

DUNBAR.—On the 16th inst., at St. Albans-place, F. H. Dunbar, M.D., late 67th Regiment, aged 31.

EMPSON.—On the 19th inst., E. Empson, M.R.C.S.E., of Crediton, aged 78.

HODSON.—On the 8th inst., at Brighton, T. Hodson, L.R.C.P.Ed., late of Deva Villa, Clifton-road, St. John's-wood, aged 54.

KNIGHT.—On the 11th inst., G. I. Knight, M.R.C.S.E., of Dorking.

MAC PHERSON.—On the 13th inst., at Fort Grange, Gosport, D. Mac Pherson, M.R.C.S.E., Surgeon-Major, late 19th Regiment.

MOORE.—On the 6th inst., E. Moore, F.R.C.S.E., of Hales-Owen, aged 70.

THOMSON.—On the 20th inst., at Campbell House, Higham Ferrars, Northamptonshire, the infant child of D. Thomson, M.D., aged 2 days.

VISE.—On the 17th inst., E. B. Vise, Surgeon, of Holbeach, aged 84.

Notes, Short Comments, and Answers to Correspondents.

CITY OF GLASGOW FEVER HOSPITALS.

THE Report of the City of Glasgow Fever Hospitals for the year ending April, 1872, which Dr. Jas. B. Russell, late Physician-Superintendent of those hospitals, has just presented to the Committee of Health of that city, strikes us as being a very good illustration of what such Reports should be. As a rule, there are no more dull and uninteresting productions than the Annual Reports of many of our public institutions. A few remarks of a common-place character on the cases treated, a good deal of information of a purely local interest, with some complimentary comments as to the usefulness of that particular institution, and a padding of statistical tables, usually make up the main portions of such Reports. On the other hand, we have noticed that Dr. Russell has the knack of stating an old fact or doctrine tersely and well, and that he is not afraid of saying something new lest it should hereafter prove untrue. He tells us that the entire sanitary medical reorganisation has during the past year been recast, affording some explanation of the lateness of his Report. He is anxious, however, that the statistics of such a vast body of epidemic disease (amounting to 7617 cases) should not be lost, or the series of reports of the results of treatment broken. The Report opens with a description of the new Fever Hospital, erected on what is apparently an admirable site at Belvidere, in close proximity to the city. It was intended to erect on this site a permanent Fever Hospital; but the pressure caused by the prevalence of relapsing fever in 1870 induced the Board to resolve that temporary pavilions should be at once provided. This was accordingly done without loss of time. The contractor "entered the stubble field on which the hospital stands on Nov. 22nd, 1870, and on Dec. 19th a pavilion was finished," and fitted for the reception of patients. All the pavilions are now double-lined, except the first two erected. They have also been slated, and heated with hot-water pipes. Still Dr. Russell hopes that the present pavilions will be wholly or in part replaced by permanent brick pavilions, adapted for the treatment of the graver epidemic diseases. The remarks which follow on the etiology of the diseases that have prevailed, and on the fever cases treated in the hospitals, especially those on the modifying influences of vaccination, are worth reading on account of their practical bearing and common-sense character.

Dr. Joy, (Grasmere.)—We regret to say that the paper has not yet appeared.

THE GREY MATTER OF THE BRAIN AND INTELLIGENCE.

To the Editor of THE LANCET.

SIR,—Perhaps some of your readers can help me out of a difficulty which has long puzzled me with regard to this subject.

No animals vary more in size than dogs. I see one dog weighing 4 lb., and another weighing 80 lb. As they are both well and proportionately made, I conclude that the dog of 80 lb. has twenty times as much grey matter in his brain as the dog of 4 lb. Intelligence is now-a-days supposed by most physiologists to be a mere function of the grey matter of the brain, and therefore if one dog has twenty times as much grey matter as another dog, he ought, one would think, to be twenty times as intelligent; just as, his spinal cord and his muscles being twenty times larger than those of the small dog, he really has twenty times more strength. Yet, so far from having twenty times more intelligence, he does not appear to have one particle more; indeed the small dogs are generally, whether rightly or wrongly, reputed to be more intelligent than the larger ones.

I shall, no doubt, be told that intelligence is only one of the functions of the grey matter, and that by far the larger portion of this substance is devoted to the supply of that nervous energy (the will?) which is required for the performance of those muscular actions which are consciously and voluntarily executed. Still, whatever part and however much of the grey matter is the seat of intelligence, the bigger dog ought to have twenty times as much of it; and, if so, why does he display only the same amount of intelligence?

I confess that I myself can see no escape out of the difficulty, excepting in the now exploded notion that the grey matter of the brain is but the instrument that something else makes use of, which is extraneous to the grey matter, and is alike both in the case of the big and of the little dog.

I am, Sir, your obedient servant,

May, 1873. INQUIRER.

*** What evidence has our correspondent to adduce demonstrating that in a dog weighing twenty times as much as another the grey matter of the brain *is* twenty times heavier? Many facts show that amount of intelligence and size of brain are not correlated. Compare the brain of the ant and its faculties with any of the higher animals. For anything our correspondent can show to the contrary, the *whole* of the increase in the size of the brain, supposing there to be any, in the bigger dog may be due to the development of that portion which, as he rightly says, is required for the performance of the muscular actions. At all events, the senses and all the ideas to which they give rise (which collectively form the major part of the intellectual operations of a dog) are alike in both large and small animals.—ED. L.

PROPYLAMINE.

Mr. P. J. Moloney (Waterbeach, Cambridge) writes to correct an error in his communication as to the dose of propylamine used by him, which was given as ten minims, whereas it should have been *two* minims. Our correspondent adds that it has appeared to him of service in cases of psoriasis.

A Medical Student had better consult our advertising columns.

HYDROPHOBIA.

WITH the approach of the dog-days comes the usual controversy as to hydrophobia, its cause and cure; albeit the malady is as frequent in winter as in summer. The recent death of a little boy at Middleton from the bite of a mad dog has supplied the opportunity so welcome to amateurs in possession of an infallible nostrum. *Notonia grandiflora* is the latest addition to their pharmacopœia; but a careful perusal of its virtues does not impress us with its infallibility. An infusion of the fresh or dried stems taken at a draught in the form recommended; but it seems that the cases in which it acted efficaciously were those in which the bitten part had been cauterised!

L. M.—There is nothing illegal in the use of the title "accoucheur." "Surgeon-accoucheur" would be a breach of the Medical Act. Our advice to our correspondent would be to wait patiently till he is fully qualified before commencing practice.

Mr. S. Cusher.—The fellowship of the Royal College of Surgeons and the licence of the College of Physicians of London.

Subscriber, (South Devon.)—The advertisement is highly unprofessional.

POST-PARTUM HÆMORRHAGE.

To the Editor of THE LANCET.

SIR,—Although a constant reader of your journal from its earliest appearance, I am often behindhand in its perusal, and sometimes do not see the reports of cases and discussions till some weeks after publication. This will account for my only having just read the interesting discussion on the Treatment of Post-partum Hæmorrhage by the Perchloride of Iron, reported in the March numbers.

Of the value of the perchloride of iron in these cases there cannot be a shadow of doubt, and we are indebted to Dr. Barnes for having discovered and recommended the use of this remedy. It is, however, too palpable that its use is fraught with no slight danger, and it is under the idea that a safer yet equally efficacious remedy is at our command that I narrate briefly the following case.

Some four or five years since, my friend Mr. Grubb requested me to see a woman, living about a stone's throw from my house, who, he feared, was sinking from post-partum hæmorrhage, which had resisted all the usual remedies in vogue, which had been most strenuously and perseveringly made use of. I found her in the last stage of these distressing cases, with all the well-marked symptoms of a near impending fatal issue. I immediately suggested a strong astringent injection into the cavity of the uterus, and, returning hastily to my surgery, I speedily dissolved some three or four drachms of tannin in a pint of water, which we injected by means of a Higginson's barrel syringe into the uterus, taking care to carry the nozzle of the instrument well into the womb. The good effect was soon apparent; some blood which was washed out by the injection coming away in congealed masses, and any recurrence of fluid hæmorrhage was stayed at once. After a short period the uterus was found to be much firmer, and the necessary measure of safe contraction gradually took place, and was continued, and thus the imminent danger was averted. She ultimately did well, though her convalescence was tedious and protracted. She has had, I believe, two or three children since.

I feel assured that this patient's life was saved by the astringent injection, and I resolved to use the same treatment in any future case resisting the ordinary measures, and I now rarely or never go to an accouchement without taking half an ounce of tannin and Higginson's barrel syringe, but have never had occasion to use it since. That the salutary effect of the tannin was produced by its coagulating the blood as it trickled from the uterine vessels, thereby plugging them, I have not the shadow of doubt; whilst probably its corrugating stimulus to the whole of the inner surface of the womb must have tended to produce muscular contraction of that organ.

I am, Sir, yours faithfully,

Warminster, May 14th, 1873. CHARLES BLESCH, F.R.C.S.

To the Editor of THE LANCET.

SIR,—Having read in your excellent journal the discussion at a late meeting of the Obstetrical Society on "Post-partum Hæmorrhage, and its Treatment by Injections of the Perchloride of Iron," I think it may not be out of place to offer my experience on the subject.

For the last ten years I have attended over 100 cases per annum, and during the first five years I lost two patients from post-partum hæmorrhage, besides having several who narrowly escaped with their lives; but since that time I have not had a single case which has threatened to be dangerous from that cause, although the same individuals have been delivered who previously had sustained a fearful loss of blood after labour. This I believe to be entirely due to the fact that I now always remove the placenta within ten minutes after delivery, thus taking from the uterus the natural obstacle to its contraction. Yours sincerely,

Loughborough, May, 1873. ARTHUR B. J. EDDOWES, M.R.C.S., &c.

Doctor indoctus, (Leeds.)—The last and, in some respects, the best book on the microscope (at least for medical purposes) is that of Drs. Mathias Duval and Léon Lereboullet (one vol., published by G. Masson, Paris). We defy the most conservative of physicians, after an intelligent perusal of this work, to doubt or to discredit the value of the microscope as an aid to diagnosis. "One is apt to denounce as useless what one does not know. It is a kind of revenge," says Fontenelle. Drs. Duval and Lereboullet will lessen the number of those who desire to be so avenged.

Naturalist, (Lincoln.)—Woodward's Handbook of Conchyliology is the most convenient and exhaustive. The French translation by M. Alois Humbert, just out, is, in some features, preferable to the original.

H. H. H.—We will inquire.

Mr. Fredk. Dalton.—If our correspondent consults our advertising columns in connexion with the reviews that have appeared, he will easily obtain the information.

THE request of *Mr. W. H. Griffiths* (Dublin) shall be borne in mind.

"PUBLIC OPINION" ON MATTERS MEDICAL.

Pro Bono Publico, (Edinburgh.)—The practice of such respectable papers as *Public Opinion*, for example, of citing among so-called "medical news" such quack announcements as "cure for small-pox," "new treatment of cancer," and certain antidotes for hydrophobia, is greatly to be reprehended. The selector of such precious items of news is presumably without medical training—a circumstance which should make him all the more circumspect in laying before the unprofessional public announcements calculated only to mislead.

Country Assistant.—1. Yes.—2. No, unless on professional duty.

MEDICAL AID ASSOCIATIONS *versus* PROVIDENT DISPENSARIES AND CLUBS.

To the Editor of THE LANCET.

SIR,—The remarks in THE LANCET for May 3rd on the Salop Medical Aid Association require some discussion. Most social reformers admit the wisdom of encouraging poor people to trust to their own providence rather than to charity or pauperism. This principle is being successfully carried out by this Association within its area of influence. THE LANCET says it sees nothing in the objects or arrangements of the Association to justify an increase in the number of practitioners in a town already well supplied. In what other way would THE LANCET propose that the work of the Association should be done at the same cost to the patient, bearing in mind that the established practitioners—jealous of their interests—are completely opposed to the Association? Does THE LANCET mean that the provision of cheap and efficient medical aid for the poorer classes is superfluous? If so, how much more superfluous must free medical aid be? There are multitudes who can pay a small premium for insuring against sickness, but who are quite unable to pay for medical aid in the usual way. Perhaps THE LANCET has omitted to notice that persons, not members of Friendly Societies, wishing to become members of this Association, are required to sign a declaration of good bodily health. In other words, the Association insures poor people of good health against sickness at the lowest possible rates. The Friendly Societies are specially adapted for initiating and carrying out a work of this description. Their own members form a substantial nucleus, and assure the success of the undertaking without appealing to public generosity, as ordinary provident dispensaries at the same rates of subscription find it necessary to do. Again, the remuneration of the medical officer of this Association, modest as it is, is munificent in comparison with that usually doled out to Poor-law medical officers in rural districts, and eked out by poor private practice. The amount of work is certainly large, but is not more than what falls to the lot of assistants in first-class provincial practices, and in this town at the present time. Why should it be more objectionable as regards the welfare of the patients for the medical officer of this Association than for a private practitioner to do a large practice? The work may be more than is sometimes agreeable, but it is not more than diligence and system can get through. If I found the work more than could be honestly and properly discharged, I think I have sufficient conscience to sacrifice private interest to public duty. The medical details—to which THE LANCET takes exception—in my official report were required items of information, otherwise they would not have been supplied, and I think they at least possess the merit of being as far as possible expressed in plain untechnical language. Medical officers of older institutions for the sick, either from choice or by request, give similar details occasionally to their lay superiors. THE LANCET also says that the report of the medical officer is not adorned by a reflection on another practitioner for advising the removal of a patient to the infirmary; but THE LANCET forgets to repeat that the patient was in the last stage of heart disease and dropsy, had to travel five miles in a cart, and died a few days after admission of exhaustion. Whenever another practitioner, regardless of humanity and professional civility, advises a patient of mine in the last stage of disease to be removed from his home under unfavourable circumstances, I shall think it my duty to report the circumstance to the managers of the Association. THE LANCET also doubts the wisdom of the Foresters in changing their system of medical aid. The Foresters, however, were induced to do so because they were not prepared to pay more than they had been in the habit of paying to their medical officers, and also on account of the success which similar Associations had already experienced at Newport, Preston, and Worcester. Derby, Northampton, Bradford, and Lincoln have since adopted the new system, and other places are preparing to do the same. Of course, such a sweeping change necessarily involves a sacrifice of existing interests; but I cannot see that the profession as a body loses. The amount expended by Friendly Societies for medical aid remains the same; but by the new system they are enabled to make the same provision for their families as under the old system they could only effect for themselves. With regard to the change not showing sufficient consideration for the former medical attendants of the Friendly Societies, I think that as soon as parties interested are convinced that reform is required, they are justified in effecting that reform. THE LANCET, by its continued efforts to improve medical education and examination, proves that it is of the same opinion. Interest must give way to progress in Friendly Societies as in more important matters. A few years ago THE LANCET was apparently in favour of legitimate provident and self-supporting dispensaries, and also of reform in the out-patients' departments of hospitals. Now, however, all such plans seem to be discouraged by THE LANCET. All innovations, however, meet with opposition. Only a few years ago the Shrewsbury members of the profession opposed the establishment of the Eye and Ear Infirmary in this town. The institution, however, has justified its existence over and over again. Only about twelve months ago THE LANCET severely criticised the report of the surgeon to that institution for publishing a few simple facts relating to diseases of the eye, which he thought it was important the subscribers and public should know, so as to induce patients to seek aid in the early stages of disease. THE LANCET seemed to think that the surgeon to the Shrewsbury Eye and Ear Infirmary belonged to the "enterprising" instead of to the steady hard-working class of practitioners. This Association of poor but provident people cannot expect to escape similar opposition and criticism; but its good intentions, usefulness, and success will, doubtless, carry it through.

I am, Sir, &c.,

THE MEDICAL OFFICER TO THE SALOP

Shrewsbury, May 12th, 1873. MEDICAL AID ASSOCIATION.

*** We insert the above letter on the principle of giving all views a fair field, and not that we assent either to the accuracy of all the writer's statements or the force of his arguments.—ED. L.

SOMNAMBULISM.

Psychiatrist, (Manchester.)—No; the somnambulist is not usually aggressive. An exception to this rule, however, is just reported from New Hampshire. On the 19th April a lad was killed in bed with a broad-axe, the murderer having entered through an open window. On inquiry it was found that another lad in the neighbourhood, who was a somnambulist, had committed the deed on one of his nocturnal tramps. Next night he was confined in an apartment in Exeter Gaol beside several other prisoners. Again in a state of somnambulism he rose, got possession of a razor, and tried to cut his companions' throats. Two of them were wounded before he was secured, and it was some time before he was awakened. A watch has now to be kept on this extraordinary criminal.

Solve Senescentem, (Torquay.)—A perusal of Professor Owen's paper on Longevity in *Fraser's Magazine* for one of the early months of 1872 will induce scepticism of such announcements as that just made in an Irish official document, that in the last quarter of 1872 fifteen persons had reached or passed the age of 100. Imperfect registration accounts for nine out of every ten putative centenarians; while Professor Owen's osteological demonstration, that the human bones cannot live or sustain life beyond 108 years, limits their number materially.

A Reader had better consult a professional man.

THE SEAT OF THE FACULTY OF LANGUAGE.

To the Editor of THE LANCET.

SIR,—It appears to me from the present state of our knowledge of aphasia, particularly with reference to the *locality* affected, which has been conclusively demonstrated by Sanders, Jackson, and others, that a test is afforded us of judging of the pretensions of phrenology to be a rational system. Can you, then, inform me if the locality as defined by recent research is the same as that said to be by phrenologists the seat of language, or organ as they term it? Further, phrenologists have one organ for language, another for form. Are you aware that any observer has noticed that the locality where in phrenological language the organ of form is placed has been affected also, or in all cases of aphasia has it been only intellectual language, spoken and written, that has been affected, and not figures—that is to say, the power of enumerating and calculating? I have read of a case in which a phrenologist writes (re-derangement of the faculty of language): "He can form letters accurately (as he began to recover) only when he has before him a copy from which to write, whilst he has no difficulty in writing figures; evidently showing that though form (i. e., the organ of form) is intact, language, which associates the word with its symbol, being impaired, is incapable of exciting the former organ into correct action; whilst with calculation the fact is otherwise." In a case of Aphasia in the *Edinburgh Medical Journal* for January, 1867, both letters and figures were incorrectly written by the patient. Is this inquiry likely to be of any ultimate service in settling the truth or otherwise of phrenology?

Your obedient servant,

May, 1873. L.R.C.P. Edin., &c.

*** Spurzheim and Combe place the seat of "language" in the eye. The seat of "form" or "configuration" is placed by the phrenologists at the inner angle of the eye. These statements do not tally with modern research. For cases bearing on the second part of our correspondent's letter we must refer him to the writings of Hughlings Jackson, Ogle, Trousseau, and others on Aphasia and Agraphia, where he will find such attempts at an explanation as can at present be given.—ED. L.

DR. FORBES WINSLOW.

THIS gentleman has been made the subject of two libellous pamphlets, published anonymously, and without the printer's name. He desires us to state that, acting under legal advice, he postpones the publication of his remarks upon them for a short time.

Iatros, (Sheffield.)—Two months ago small-pox was rather prevalent in Vienna, and some three weeks since two cases of cholera were reported, but these latter were of the non-Asiatic type. The health of the city is fair, and, if the sanitary arrangements of the municipality are carried out effectively, will be excellent.

L.R.C.P. & S.—We hear that a class for the purpose is in formation at Charing-cross Hospital. No doubt the Dean could inform our correspondent.

EFFECT OF CARBOLIC ACID ON THE URINE.

To the Editor of THE LANCET.

SIR,—In reply to a letter in your issue of the 12th ultimo from Mr. J. Nicholls, of Chelmsford, with regard to the effect of carbolic acid on the urine, I would state a case which occurred under my notice rather more than two years since, whilst house-physician to the Charing-cross Hospital.

A man, I believe a tailor or cloth-cleaner by trade, was brought in, having taken poison, mistaking a bottle of strong solution of carbolic acid, which he used in his trade, for one containing beer. Being very thirsty, he swallowed, as he said, a good draught of it. He was admitted and placed under the care of Dr. Headland. On making my morning visit to the wards the following day, I was much astonished at the appearance of the man's urine in a glass over the bed. It was of a blackish-green colour, and very much (as mentioned by Mr. Nicholls) like a strong infusion of tea with the addition of iron, and was loaded with lithates to a degree. I remember calling the attention of Dr. Headland and the late Dr. Hyde Salter to this, and was directed to send a specimen to the chemical laboratory, but with what ultimate result I quite forget, having unfortunately no notes of the case. I would add that this appearance passed off quite as suddenly as it came. The next morning the patient's urine was of the natural tint, and free from deposit.

Mr. Nicholls says that this symptom does not occur with the internal use of the acid. Probably the reason our cases differ in this respect is the fact of the patient here alluded to having, unfortunately for himself, taken an excessive and poisonous dose.

I am, Sir, your obedient servant,

Hungerford, May 19th, 1873. S. S. NOAKES, L.R.C.P. Lond., &c.

A LADY ON MIDWIVES.

An Experienced Mother, in the *Liverpool Daily Post*, does not much advance the question whether midwifery should be done by men or women. She complains that medical men have their young assistants, mere boys, who are sent to act as accoucheurs. There are strong checks to such an evil. The private practitioner is hindered from doing this by motives of self-interest, if from no others. The parish doctor must name a substitute to act in his absence. The "Experienced Mother" also objects that some men are impatient and exacting, and not careful enough not to wound feelings of delicacy. So are some women. And we have heard women say they prefer men to attend them, because they have more feeling than women.

L. H. R.—The term has no legal significance. A certificate of competency from an individual medical man would have no legal value. The medical officer of a workhouse is relieved of responsibility for cases attended by a midwife appointed for the purpose by the guardians; but he is not himself at liberty to send a midwife as his substitute to attend midwifery cases. Of course, if a midwife appointed by the guardians sends for him, he becomes responsible.

Convalescent, (Edgbaston.)—Yes; the London and North-Western and the Midland Railway Companies have declined to accede to the request for a similar privilege to that allowed by the North-Eastern Railway Company, which allows patients visiting convalescent homes to travel the double journey for a single third-class fare.

Mr. H M. Fernie.—The term of three years is too short. But unlimited tenure of office is not now the rule of hospitals, and is open to great objections.

AN URGENT APPEAL.

To the Editor of THE LANCET.

SIR,—I take this opportunity of making known, through the medium of THE LANCET, the facts of a very sad case, feeling quite sure that it only requires to be mentioned to elicit sympathy and help from those of my professional brethren who are able to contribute in some small way to its relief.

Dr. William B. Clayton, who was for nearly thirty years connected with the Dispensary of Athy, county Kildare, was driving home, on the night of March 23rd, from paying a professional visit. When passing through the town, his Croydon came into contact with a heap on the road. He was thrown out on his head. He, however, managed to pick himself up, and reached home just in time to tell what had happened to him. He became unconscious at once; symptoms of compression of the brain set in; and he died two days afterwards from extravasation of blood, &c., leaving a wife and eight children wholly unprovided for.

Dr. Clayton was a man of sterling character, endeavouring to do his duty to the best of his ability, and was respected by all who knew him. Leaving his family, as he did, in needy circumstances, was no fault of his, as he tried some years ago to insure his life, but was found ineligible. A fund is now being raised for his family, and I will only be too happy to receive and acknowledge any subscription sent to me for that purpose; and as I know this is a truly deserving and distressing case, I earnestly hope this appeal may call forth a generous response.

Dr. Clayton's eldest son has commenced the profession, and it would be hard to think he should be prevented from proceeding with it owing to the want of funds.

I am, &c.,

LAMBERT H. ORMSBY,
Surgeon to the Meath Hospital, Dublin.

12, Lower Fitzwilliam-street, Dublin, May 20th, 1873.

P.S.—The following gentlemen will also receive and acknowledge subscriptions for the above:—Rev. Henry McDonald, the Rectory, Athy, county Kildare; Frederick Haughton, Esq., Levitstown, Athy, county Kildare; F. M. Carrol, Esq., J.P., Moon, Ballytore, county Kildare; Rev. R. W. Baggot, Fourtown Glebe, county Kildare.

Candidate, (Reading.)—The Senate of University College, London, is opposed to making Greek compulsory at examination, and Convocation has committed itself to the same view. The arguments for and against the study of Greek at Universities are stated with much ability in an article in the current *Quarterly Review*.

L. G. H., (Portsmouth.)—Dr. Gaillard Thomas's work (Trübner and Co.) would probably best meet our correspondent's requirements.

A Student.—Yes.

Prophylaxis, (Lancashire.)—The prevalence of diarrhœa at Wigan has been investigated by Mr. J. Netten Radcliffe at the instance of the Local Government Board. Defects in the mode of excrement removal, even more than bad food or bad lodgment, are stated as the cause of the disease.

An Old Subscriber, (York.)—We suspect that our information is quite as reliable as that of our correspondent, and we may state that his inference, though natural, is incorrect.

Notes and Queries.—The contents of the bowels ought to have been more minutely examined than they seem to have been. But there were some indications of previous disease, and we know that it is possible to have ulceration proceed in girls to a serious extent insidiously, and for a fatal effect to be at last rapidly developed.

Clericus, (Surbiton.)—Dr. Pusey has just returned from abroad in thoroughly re-established health.

Mr. James Beal, (London.)—The object is a highly commendable one; and, with a view to its adequate realisation, the heads of the profession as well as a first-rate architect should be consulted—say the Presidents of the Royal Colleges of Physicians and Surgeons and the President of the Society of Architects.

W. S. S., (Queen-street.)—The pamphlet cannot be purchased. It was drawn up with the specific object of imparting some useful information to soldiers' wives and families.

PHARMACOPŒIA IN WAR.

Is there no Pitt in the United States Congress to protest against the introduction into warfare of elements even less justifiable than the "tomahawk and savage"? Two Sioux chiefs having been treacherously poisoned with strychnia by the Americans, a fearful retribution was inflicted on the perpetrators. Evidently the struggle with the Indians is something more than "war to the knife."

"DR. PRITCHARD COME TO TOWN."

THE following paragraph is taken from the *West Essex Observer* for May 10th. We hope the subject of the eulogy repudiates the article as likely to do him more harm than good:—

"The inhabitants of Clavering and the neighbouring parish of Langley have for many years been placed at serious disadvantage in being so far removed from medical advice and assistance. This inconvenience has at length been removed by the coming of Mr. R. Clement Pritchard, who is a Fellow of the Royal College of Surgeons, and a Licentiate of the Faculty of Physicians of Glasgow. Mr. Pritchard studied two years at Westminster Hospital, and also two years at the Birmingham Hospital, and has brought away with him the Professors' certificates of proficiency in the various branches of medical and surgical study, also prizes for the midwifery and sanitary departments. This will show how thoroughly Mr. Pritchard has qualified himself for the general practice of his professional duties. Rumours that Mr. Pritchard is not going to remain among us having been circulated both in Clavering and Langley, even within the last few days, his friends feel it to be their duty, in the interest of the public generally, as well as his own, to state that such reports are entirely without foundation, as Mr. Pritchard, by his skilful attention and obliging manners, has already won for himself the good opinions of many, and has met with success beyond his expectation,—such indeed as to warrant the hope of shortly establishing an extensive and remunerative practice.—*Communicated.*"

Ægrotus, (Clifton.)—The patent Cavendish bed-table and reading-desk combined is the best apparatus for the purpose, and may be obtained of Mr. J. Carter, New Cavendish-street, W.

Mr. Fry (Yorktown) is thanked.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Barclay, London; Mr. Richards, Southampton; Mr. Jeaffreson, Newcastle-upon-Tyne; Mr. Morgan, Litchfield; Mr. Denis, Ramsay; Mr. Leslie, London; Mr. H. Spencer, London; Mr. Ormsby, Dublin; Mr. S. Peck, Boxmoor; Mr. Bellchambers; Mr. Wilson, Leith; Mr. Dayton, Devizes; Mr. Lewis, Houston; Mr. Lawton, Brecon; Mr. Batsford, Wakefield; Mr. Moloney, Waterbeach; Mr. Semple, Thurso; Dr. Davies, Maesteg; Dr. Bodington, Kingswinford; Mr. Hartley, Cheltenham; Mr. Leman, Chipping-Sodbury; Mr. J. Harris, Newtown; Mr. Maxwell, Stirling; Dr. Gill, Wirksworth; Dr. Collins, St. Albans; Mr. Griffiths, Pwllheli; Mr. Jones, Wincanton; Mr. Fife, Norwich; Mr. Wilson, Dhurmsala; Mr. Davidge, Morae, India; Mr. Morris; Mr. Colmore, Dunoon; Mr Deacon, Uttoxeter; Mr. Moore, Neath; Mr. Georges; Messrs. Goodhall, Backhouse, and Co., Leeds; Mr. Roberts, Cardiff; Mr. Hall, Bromley; Mr. Wright, Calne; Dr. Steele, Liverpool; Mr. Noakes, Hungerford; Mr. J. R. Read, London; Mr. Coles, Taunton; Mr. Ramsay, Burnley; Mr. Marsh, Shrewsbury; Mr. J. Craig, Stoke-on-Trent; Mr. Bridge, Birmingham; Mr. J. W. Barry, Ramsgate; Mr. Griffiths, Dublin; Mr. Wright, London; Dr. Newcombe, Gateshead; Dr. Willing, Great Wakering; Mr. Harrison, Birmingham; Mr. Mooney, Brighton; Mr. Moore, Peterfield; Mr. Turner, Landport; Mr. Cartwright; Mr. Dalton, Newhaven; Dr. Orange, Wokingham; Mr. Leeming, Kendal; Mr. Kelly, Bridlington; Mr. Cranfield, London; Mr. Kierman, London; Dr. Thomson, Higham Ferrers; Mr. Minnett, Clipstone; Mr. Pearce, York; Mr. Cresswell, Dowlais; Mr. Blackman, Highbury; Mr. Bolton, Binfield; Mr. Axford, Peterborough; Mr. Barnes, Bexley; Mr. James, Southfield; Mrs. Holmes Coote, London; Mr. R. L. Anson, Watford; Mr. Thompson, Bow; Mr. Cogan, Northampton; Mr. South, Oxford; Mr. Rolles, Weybridge; Mr. Carr, Sherburn; Mr. R. Hicks, Gateshead; Dr. Ellery, Axminster; Mr. Bowen, Stourport; Mr. T. Johns, Wakefield; Mr. Casey, Belfast; Mr. Morton, Dover; Mr. C. J. Richards, Worcester; Dr. Gurney, Nice; Mr. Nutt, Bolton; Mr. Pearce, Derby; Mr. Eddowes, Loughborough; Mr. Evans, Penworthan; Dr. Lyle, Newcastle; Dr. Pyle, Sunderland; Mr. Lupton, Harborough; Mr. Elmore; Mr. W. King, Monmouth; Mr. Bennett, Thame; Mr. Edmonds; Dr. Hafferton, Ferry Hill; Dr. Lowson, Lichfield; Mr. Pogson, Seacroft; Mr. England, Herne Bay; Mr. Sparke, Bury St. Edmunds; Dr. Keogh, Bagshot; Mr. R. Morris, Exeter; Mr. Curran, Mansfield; Mr. Hardie, Shrewsbury; Mr. Thomas, Harwich; Mr. King, Leeds; Mr. Hillson, Rotherham; Mr. Hay, Minster; Mr. H. Semple, Bromley; Mr. Hutton, Poole; Mr. South, Bridgnorth; Mr. J. Henry, Hampton; Mr. Bryant, Robertsbridge; Mr. Mayne, Ilfracombe; Mr. Dawson, Wigan; Mr. Fisher, Oakham; Mr. Knight, Dorking; Dr. Elliott, Hull; Dr. Jay, Grasmere; Mr. Howell, Worcester; Mr. Lynes; Mr. Rennie, Sheffield; Dr. Bentham, Hackney; Mr. W. Trench, Reading; Mr. Griffiths, Cefn; Mr. Thomson, Wellington; Mr. Morris, Uxbridge; Mr. Smith, Tipton; Delta; Alpha; A Medical Student; Vaccinifer; L. M.; L. G. H.; The Principal of Owens College, Manchester; Sanitas; M. B.; A Young Accoucheur; Vigilance; An Old Subscriber; E. L. G.; Slasher; L.R.C.P.; A Student; H. H. H.; M.R.C.P., &c.; W. S. S.; Non Est; R. H.; B. B.; A Reader; &c. &c.

Rochdale Observer, Irish Poor-Law Intelligencer, Brierly Hill Advertiser, Croydon Chronicle, Tavistock Gazette, Yorkshire Post, Fleetwood Chronicle, West London Observer, Canada Lancet, Nottingham Guardian, Canada Medical and Surgical Journal, Doncaster Gazette, North British Daily Mail, Doncaster Chronicle, Canada Medical Record, Rotherham Advertiser, Torquay Times, and *Lincoln Journal* have been received.

METEOROLOGICAL READINGS

(*Taken by Stewart's Instruments*).

THE LANCET OFFICE, MAY 22ND, 1873.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks.
May 16	30·03	E.	45	49	91	57	41	...	Overcast
„ 17	29·73	N.E.	45	50	93	64	44	...	Fine
„ 19	29·50	N.E.	41	45	82	53	43	...	Overcast
„ 20	30·36	E.	41	46	88	63	39	...	Fine
„ 21	30·18	S.W.	46	50	...	...	44	...	Rain
„ 22	29·98	W S W	53	55	60	56	46	...	Overcast

Medical Diary of the Week.

Monday, May 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, May 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. J. H. Parker, "On the Archæology of Rome."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Greenhow, "On a Case of Abdominal Aneurism successfully treated by Proximal Pressure of the Aorta."—Dr. Geo. Johnson, "On the Etiology of Albuminuria."—Dr. Wilson Fox, "On Temperature, Pulse, and Respiration in Phthisis and Acute Tuberculisation of the Lungs."

Wednesday, May 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
CANCER HOSPITAL.—Operations, 3 P.M.

Thursday, May 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall, "On Light."

Friday, May 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—9 P.M. The Earl of Rosse, "On the Radiation of Heat from the Moon, the Law of its Absorption by our Atmosphere, and its Variation in Amount with her Phases."

Saturday, May 31.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. J. Morley, "On the Historical Method."

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